

MODERN

TECHNOLOGY DEPT.

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mi

First

First Copy

LITHOGRAPHY



Permanent Cerise Toner 2642P

Senelith Inks

were the first lithographic inks
made from dyestuffs
treated with sodium tungstate
for better sunfastness
and are still leading
with their outstanding resistance properties

The Senefelder Company, Inc.

"Everything for Lithography"

32-34 Greene Street

New York, N. Y.

Beauty Is Only Skin Deep! *SAYS WHO?*



WE DO, LADY! Because when your picture is reproduced in a mailing piece, it's the *surface* of the paper that determines whether you'll look appealing . . . or appalling.

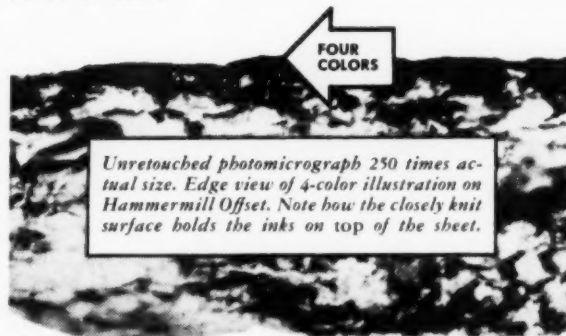
That's why so many profit-wise lithographers are turning to Hammermill Offset. This paper insures brilliant, lifelike printing results because it keeps the printing inks where they belong—on the surface of the sheet.

In your shop, Hammermill Offset runs fast and trouble-free on the press . . . prints clean . . . holds accurate, fine-line register even through difficult color runs. It does all a paper can do to help you turn out a good job at a profit.

When you deliver the job on Hammermill Offset, your customer gets sharp, clean type reproduction . . . rich, clear halftones . . . sparkling color work. And he gets the economy of work-and-turn printing without objectionable printing "show through." In a word, Hammermill Offset will please him . . . and that's your first step toward profitable repeat business.

WANT SOME NEW SELLING IDEAS?

► Send for new collection of commercial specimens on Hammermill Offset. Contains reprints of top-notch offset jobs produced for nearly a dozen different advertisers . . . folders, magazine inserts, catalog pages . . . examples of 1-color, 2-color, 4-color work . . . unusual treatments in layout and design. A warehouse of new ideas you can turn into sales.



HAMMERMILL OFFSET

BY THE MAKERS OF HAMMERMILL BOND

Send for it!

Hammermill Paper Co.
Erie, Pa.

Please send me, free, Collection of Commercial Specimens on Hammermill Offset. ML FE

Name _____

Position _____
(Please attach to business letterhead)

SENEFELDER

LITHOGRAPHIC SUPPLIES

Everything to make the job easier ~



Each month we will briefly describe an outstanding item in the Senefelder group of supplies for the lithographer.

KALININ DRIER

Good bronze jobs have their ink and bronze powder adhere firmly and cleanly onto the paper. Ordinary paste or liquid driers generally used in lithographic inks are apt to cause crystallization in the ink and tackiness on the paper. Powdering the sheets, a makeshift remedy, is expensive in application and unsatisfactory in results. It impairs the brilliancy of the color and the life of the ink. Kalinin Drier, a new rapid paste drier, added in small doses to the ink overcomes all of these troubles.

Kalinin Drier is especially prepared for eliminating the detrimental effects of crystallization and tackiness in lithographic inks. It has exceptional drying properties; it remains neutral on stone, zinc or copper plates and does not change the consistency or the shade of the ink.

Kalinin forms a durable binder between paper, ink and bronze powder; it dries perfectly smooth without leaving any tack behind and makes possible the printing of heavy brilliant solids even on poorly sized papers without rubbing off. Kalinin eliminates the glare and disharmony of color on super coated papers and lends a tranquil appearance of water color to the ink. Kalinin rectifies the detrimental effects of crystallization in inks caused by certain base colors which do not penetrate sufficiently into the paper and which prevent subsequent colors from drying.

Kalinin eliminates the sticking together of sheets without powdering or slip sheeting; it does not stick to the rollers in spite of its rapid drying properties. Kalinin is economical and indispensable in lithographing. Kalinin is packed in one pound cans at 60 cents per lb.; larger cans are proportionally lower in price.

Directions for mixing the exact proportions of Kalinin Drier to the various kinds of ink for use on different kinds of paper and for various classes of work are contained in our booklet No. 99, which is forwarded with every shipment of Kalinin Drier.

The Senefelder Company, Inc.

"Everything for Lithography"

32-34 GREENE ST.

NEW YORK, N. Y.

Absorbent Cotton
Acids, Litho
Acid Brushes
Alum Powder
Aluminum Plates
Antifin Rubber
Preserver
Asphaltum Liquid
Asphaltum Powder
Berlin Paper
Bronze Powders
Bronzing Pads
Carborundum Powder
Caustic Soda
Cellulose Cleaning
Paper
Charcoal Sticks
Chemicals, Litho
China Marbles
Cold Top Enamel
Collodion Emulsion
Columbia Paper
Copierlack
Cornelin Solution
Correction Slips
Counter Etch
"Convenient"
Crayon Holders
Crayon Ink

Crayon Pencils
Crayon Transfer
Paper
Crayons, Litho
Deep Etch Supplies
Developing Ink
Double Etch Salt
Duralac Lacquer
Egg Albumen
Engrav. Needles
Engrav. Stones
Etches
Excelsior Paper
Felt Daubers
Film Filters
Flannel, Litho
Flint, Graining
Fly Cord

Fountain Etch
French Chalk
Gamburger Slips
Gelatine Foils
Glass Marbles
Glycerine
Graining Marbles
Graining Quartz
Gum Arabic
Hand Rollers
Hydroquinone
Impression Rubber
Sheeting
India Paper
Ink Mullers
Ink Knives
Ink Slabs
Liquid Tusche

Litho Inks
Litho Stones
Lump Pumice
Magnesia Carb.
Maple Balls
Mica Powder
Moleskin
Molleton
Mutton Tallow
Negative Brushes
Negative Collodion
Negative Glass
Negative Varnish
Neg-O-Lac
Nitric Acid
Offset Blankets
Offset Inks
Offset Powder

Opaque
Palm Oil
Pens, Litho
pH Slide Comparators
Photographic Gelatine
Platinum Etch Salt
Plates, Lithographic
Press Boards
Printing Inks
Process Glue
Process Oil
Proofing Inks
Pumice Powder
Quartz, Graining
Rolling-up Ink
Rosin Powder
Rubber Snake Slips
Rubbing Stones

Schumacher Slips
Scotch Hone
Scotch Slips
Scotch Tape
Scraper Leather
Scraperwood
Senebumen
Senelac Varnish
Sensitizers
Sharp Etch
Snake Slips
Soapstone
Sponges
Steel Balls
Steelclay Marbles
Stone Cement
Strecker Salt
Sulphur Flour
Tracing Blue
Tracing Paper
Transfer Ink
Transfer Papers
Transparency
Solution
Tusche
Varnishes
Wire Brushes
Zinc Plates
Etc., Etc.

MODERN LITHOGRAPHY

LITHOGRAPHED IN THE INTERESTS OF LITHOGRAPHERS EVERYWHERE



THE COVER

"The Hanging Gardens of Babylon," one of the "Seven Wonders of the World" and one of the subjects Shell Oil dramatized in the advertising campaign described on page 26.

February, 1941
Volume 9 No. 2

LITHOGRAPHY AND AN IDEA, THAT'S an unbeatable combination when they really team up to do a job. Porter Leach, who describes how the combination worked to put over one of the most ambitious advertising campaigns Shell Oil has ever undertaken beginning on page 26, believes that lithography is especially stimulating to idea men when they are on the hunt for a new approach because it appeals to their creative side. (Page 26)

THE ATTITUDE MOST LITHOGRAPHIC sales managers take is that the men under them who are out asking Mr. Customer if he wants to buy some nice lithography—in other words, their salesmen, are grown up men, old enough to tell what time it is. Therefore, they don't want or expect them to spend a lot of time making out reports. They do feel that some checking up is necessary, the salesman being human like anyone else, but that it should be kept to a minimum. (Page 31)

ARE YOU FAMILIAR WITH THE mechanism of an offset press? Oh, to be sure, you know the plate prints onto the blanket and the blanket kisses the paper and all that. But do you know the function of the various parts of an offset press? Unless you're a pressman, you're apt to be a bit hazy on the subject, we'll wager. (Page 43)

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MODERN LITHOGRAPHY

Reg. U. S. Pat. Office

GRANT A. DORLAND, President; IRA P. MACNAIR, Vice-President; WAYNE E. DORLAND, Secretary-Treasurer. RICHARD ROLEY, Editor. Published monthly on the 15th by The Photo-Lithographer, Inc., Publication Office, 3201 Arch St., Philadelphia, Pa. Advertising and Editorial Office, 254 W. 31st St., New York, N. Y. ADVERTISING RATES: Advertising rates made known on application. Closing date for copy—20th of the month previous to date of issue. SUBSCRIPTION RATES: \$3.00 per year in the United States, \$4.00 per year in Canada. Single copies, 30 cents. Entry as second class matter is pending at the Post Office at Philadelphia, Pa., under the Act of March 3, 1879.

"It's a
Honey"



... that's what
they're saying about

THE NEW ROBPORT BLANKET

Honest Injun, we're walking on air!

We knew we had a good offset blanket, one everybody from the boss on down would like, but we had no idea we had one half as good as they say we have. By "they" we mean the people who've been singing its praises and bending our ear to tell us how pleased they are ever since we brought it out. It's music to the ears.

Now we know how we stand.

Now we know that the new Robport Blanket will perform under all conditions of offset press opera-

tion. It's been tried, tested and found to meet every requirement a blanket should.

So, if you're looking for a blanket made of the highest grade fabric available; one that is good and strong; a blanket surface-treated to guard against stretching; a blanket that will resist tear and fracture, tackiness, embossing, blistering and engraving; a blanket possessing absolute uniformity of thickness, why, then you're looking for the new Robport Blanket.

Why don't you let us talk to you today, now, about our new blanket? You'll be glad we did!

ROBERTS & PORTER

I N C O R P O R A T E D

New York: 100 Lafayette St. Phone: CANal 6-1646

Chicago: 402 S. Market St. Phone: WABash 6935

CANADIAN AGENT: CANADIAN FINE COLOR CO.
240 LOGAN AVENUE • TORONTO



● Not the least of *Moistrite Offset's* virtues is its economy. You can buy more expensive paper; you can buy cheaper paper; but for a moderately priced offset paper you will find nothing to compare in value to *Moistrite Offset*. It is not pure chance that the surface of *Moistrite Offset* is exceptionally smooth; luck did not dictate its uniform color and texture; the use of a moisture-proof package to protect its careful mill-conditioning is not a coincidence. These things are the direct result of the fact that *Moistrite Offset* is a product of a great corporation that employs every modern improvement known to paper making. The qualities of *Moistrite Offset* that make it the right paper for you to use on black-and-white or full-color reproduction are, fortunately, easily demonstrat-

MOISTRITE OFFSET IS ECONOMICAL

ed. Such a demonstration is to be found in

the *Moistrite Offset* Portfolio. Write for a copy today. It's free.

MEAD
papers

The MEAD CORPORATION

"PAPER MAKERS TO AMERICA"

THE MEAD SALES CO. . . 230 Park Avenue, New York City
DILL & COLLINS INC. • WHEELWRIGHT PAPERS, INC.
New York • Philadelphia • Boston • Chicago • Dayton • Kingsport

Offering a completely diversified line of papers in colors, substances, and surfaces for every printed use, including such famous grades as Moistrite Bond and Offset, Wheelwright Bristols, D & C Richgloss Enamel and Canterbury Text.



Into every negative enters

COPY

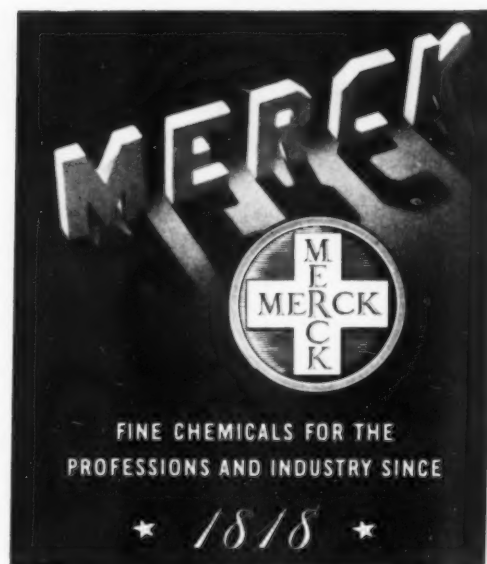
CRAFTSMANSHIP

CHEMICALS



To produce a finished negative of the better type, you need better copy, better craftsmanship and better chemicals.

Merck chemicals for the graphic arts are *better* chemicals—the kind that go a long way toward producing *better* results.



MERCK & CO. Inc. *Manufacturing Chemists* **RAHWAY, N. J.**

New York: 161 Sixth Ave., Philadelphia: 1649 N. Broad St., St. Louis: 4528 S. B'way. In Canada: Merck & Co. Ltd., Montreal and Toronto

$$2 + 2 = 4$$

*It's Always the Same
with*
EAGLE-A ALBION OFFSET

Just as sure as two and two make four, you know that your next lot of Eagle-A Albion Offset will be the same as the last. Uniform, dependable quality—that's why so many experienced offset printers *standardize* on this well-known line. Experimenting is too expensive!

Here are some of the reasons for Albion Offset popularity:

1. Made and sized correctly for offset printing—by the first papermakers in this field.
2. Lies flat for maximum automatic feeding.
3. Dependable—moisture control and waterproof packing assure accurate register.
4. Guaranteed quality—made only from carefully selected pulp.
5. Clean and well formed—free of foam specks and dirt.
6. Good strength with desirable bulk.
7. Controlled density—colors ride on surface and are more brilliant.
8. Economical—no abrasive filler to wear down plates.
9. Uniform pick test—adaptable to most offset inks.
10. Both sides alike—important on backed-up jobs.

This well-rounded line includes Arctic White, India, a new Ivory—eight sizes—seven weights—regular and special finishes. Ask your Eagle-A paper merchant for samples, dummies and prices.



AMERICAN WRITING PAPER CORPORATION
HOLYOKE MASSACHUSETTS

NEW YORK OFFICE
41 Park Row

PHILADELPHIA

Solicitors at
CHICAGO

BOSTON OFFICE
80 Federal Street

SAN FRANCISCO



SAMSON AND LITHO-PRINT OFFSET ROLLERS

BINGHAM'S SAMSON (VULCANIZED OIL) and LITHO-PRINT OFFSET ROLLERS combine highest quality with peak performance at prices no printer can afford to miss out on. BINGHAM PRICES are EFFICIENCY PRICES because mass production, modern methods and quantity distribution enable BINGHAM to provide MORE FOR LESS. And BINGHAM'S SIXTEEN strategically located PLANTS mean economy, speed and convenience to our customers.

CHICAGO

ATLANTA	KALAMAZOO
CLEVELAND	KANSAS CITY
DALLAS	MINNEAPOLIS
DES MOINES	NASHVILLE
DETROIT	OKLAHOMA CITY
HOUSTON	PITTSBURGH
INDIANAPOLIS	ST. LOUIS
	SPRINGFIELD OHIO

Also distributed by

California Ink Co.	San Francisco
Dry Climate Ink & Roller Co.	Denver
McKinley Litho Supply Co.	Cincinnati
Harrigan Roller Co.	Baltimore
Dorsey Printers Supply Co.	Memphis

SAM'L BINGHAM'S SON MFG. CO.

Lestoil

NON - INFLAMMABLE

NON - TOXIC

The Ideal Inexpensive Cleanser for Dampening Rollers

Quickly dissolves the ink which the dampening rollers have accumulated. Requires less scrubbing and scraping of the fabric and consequently prolongs its life. » Reduces fire hazards. If a lighted match were thrown into Lestoil, the flame would go out. Its use may enable you to secure a reduction in your insurance rates. » Harmless to those coming in contact with it. There is no possibility of it causing dermatitis or similar skin irritations. » PH control tests show it is practically neutral, and if any residue is left in the dampening rollers, it will not have a detrimental effect on the press plate. » Very effective for washing sponges. It rapidly dissolves the grease and slime, leaving the sponge soft and fluffy, the same as when it was new. » Mixed with water, the solution costs but a few cents per gallon. » A liberal sample will be supplied on request.

THE FUCHS & LANG MFG. COMPANY

(ESTABLISHED 1870)

DIVISION - GENERAL PRINTING INK CORPORATION

100 SIXTH AVENUE • NEW YORK

Boston Chicago Cincinnati Cleveland Philadelphia St. Louis
San Francisco Fort Worth Los Angeles Toronto, Canada

STRENGTH



THE FUCHS & LANG MFG. COMPANY

ESTABLISHED 1895
DIVISION - GENERAL PRINTING INK CORPORATION

100 SIXTH AVENUE - NEW YORK

Branches: Chicago, Cincinnati, Cleveland, Philadelphia, St. Louis,
San Francisco, Sanborn, Los Angeles, Toronto, Canada

Your Printer is a SERVICE STATION for
NEENAH
Fine Business Papers

Get acquainted with your
Printer

BUSINESS WEEK

PURCHASING

BANKING

The JOURNAL of ACCOUNTANCY

Paper Progress

To Sell more Printing

Look for Neenah in the watermark

The printer plays an important part in business! In the production of countless office forms, sales catalogs, booklets that stimulate sales and increase profits—everywhere, **PRINTING HELPS BUSINESS.** That fact is being pounded home to thousands of executives and buyers of printing throughout the country in **NEENAH'S** national advertising campaign. This advertising is for you—for more printing business.

These ads are also telling buyers what you already know: that **NEENAH** papers are made for better printability, distinctive appearance, **FEELING** of quality, and unusual strength—to meet the demands of **MODERN** business.

Made to the specifications of printers, and strongly advertised to buyers—**NEENAH PAPERS ARE EASIER TO PRINT, EASIER TO SELL.**

NEENAH PAPER COMPANY

NEENAH, WISCONSIN



Manufacturers of Fine Rag Content Bonds, Ledgers, Index and Lightweights

FEBRUARY 1941

"Our Tough Jobs

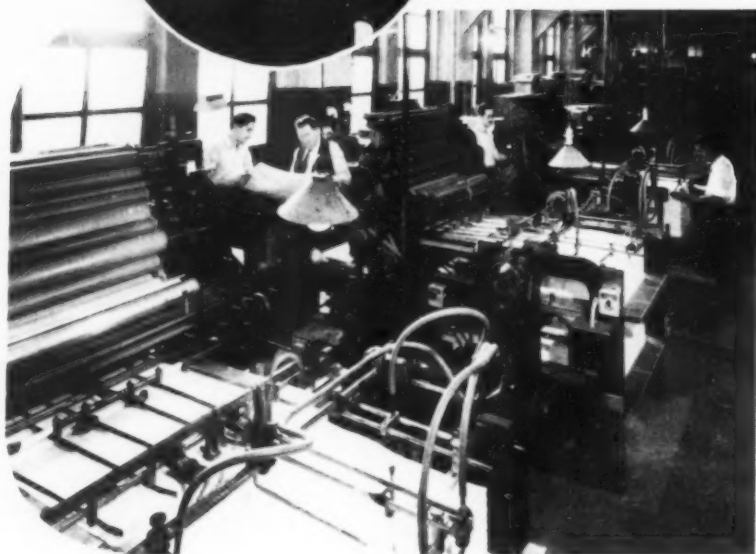
are easily reproduced on
our ATF-Webendorfer Presses"

Says Mr. A. Mass



President, American Offset Corporation, New York City, one of the largest color lithographers of quality offset, and letterpress, for an exacting clientele. View below shows 3 of their 4 ATF-Webendorfer offset presses.

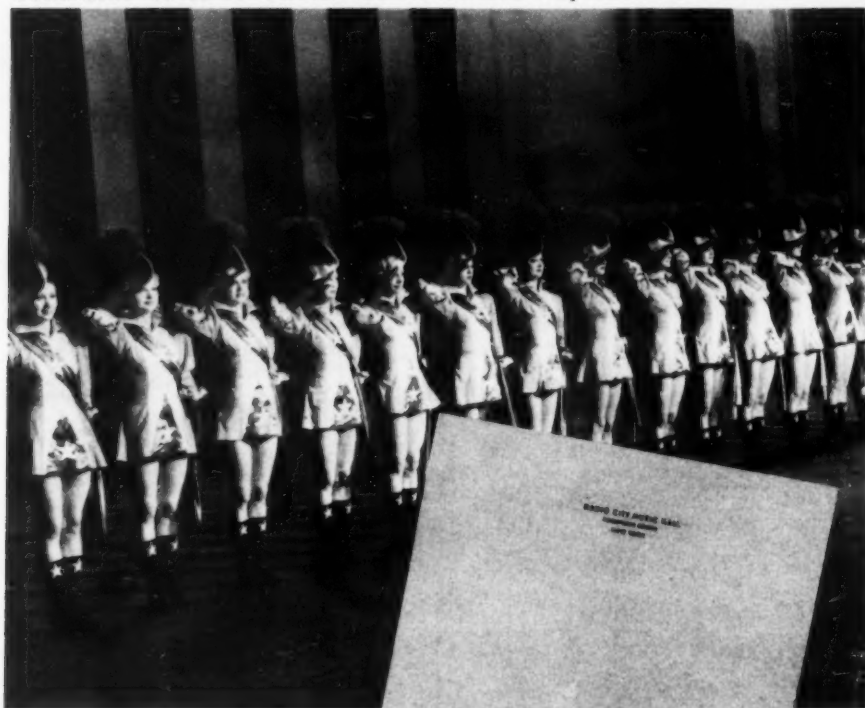
"A good deal of our offset involves hair-line register of delicate 4- and 6-color process work which is combined with intricate finishing operations," says Mr. Mass. "One of the chief requirements of this work is to produce unusually soft vignettes. On these tough jobs particularly, we find that our ATF-Webendorfer presses turn out a grade of work that meets every requirement. I attribute our success on this exacting work to a combination of experience and painstaking craftsmanship with presses that provide great presswork flexibility and extremely accurate control.



TRIBUTES like this are being paid ATF-Webendorfer presses in many other plants today where modern offset is being combined with profitable letterpress. Why not investigate the possibilities in your plant? There's no obligation, except to learn how you, too, can get more business and make more money in your pressroom.

Visit your nearest ATF Branch TODAY!

ATF
AMERICAN TYPE FOUNDERS
OFFSET DIVISION • 200 ELMORA AVENUE, ELIZABETH, NEW JERSEY



do they see
PRECISION
IN YOUR LETTERHEAD?

PRECISION is the watchword at Radio City Music Hall. You see it in the coordinated dancing of the famous Rockettes...the courteous efficiency of the ushers...the functional design of the theatre itself.

And for its letterhead, the Radio City Music Hall chose Strathmore Paper, because it expresses its business precisely...is truly representative of the world's largest theatre.

You want precision in *your* letterhead...want it to express exactly the spirit of your business. And Strathmore Paper can convey this character of impression for only a fractional difference in cost.

A letter written on STRATHMORE BOND, or STRATHMORE WRITING, costs less than 1% more than a letter written on the cheapest paper you might buy. And on STRATHMORE PARCHMENT, or STRATHMORE SCRIPT, as fine papers as can be made, a letter costs only 2.9% more. Such plus value, for so little cost difference, is sound business economy. Strathmore Paper Company, West Springfield, Mass.

STRATHMORE **MAKERS**
OF FINE
PAPERS



TIME...

THE MOST VALUABLE COMMODITY
IN ANY BUSINESS

YOU CAN SAVE TIME WITH

MERCURY ROLLERS & BLANKETS

YOU can save valuable make-ready time by using Rollers and Blankets that are absolutely uniform in construction. Mercury Rollers are perfectly concentric and have an even, satin-smooth surface which enables you to get accurate ink distribution with minimum effort. The oil-resistant surface and plies of Mercury Blankets prevents swelling, thus avoiding waste of time in adjusting for minor imperfections. The safe minimum stretch of these Blankets, and their great tensile strength, adds to their durability and efficiency.



RAPID ROLLER COMPANY

D. M. RAPPORT, Pres.

Federal at 26th Street,

CHICAGO

Versatility + Printability = *Permanized Letter*

If you haven't examined Whiting-Plover's new *Permanized Letter*, ask your Permanized Distributor to show you this paper, for it's as soft as a whisper and more versatile than a country doctor.

Let your customers see and feel *Permanized Letter* . . . it will help you sell many a job! For truly impressive Letterheads, Brochures, Announcements, Invitations, Menus . . . and here's a timely tip - Annual Reports - *Permanized Letter* fills the bill. It's an excellent paper to carry in stock, and will run through your presses like a song!

Permanized Letter
RAG CONTENT

AVAILABLE IN WOVE AND LAID IN EITHER
WHITE OR IVORY IN SUBSTANCES 20, 24 AND 28.

WHITING-PLOVER PAPER COMPANY

STEVENS POINT, WISCONSIN

Exclusive manufacturers of

Permanized RAG-CONTENT
BOND - LEDGER - THIN *Papers*

The Industry Will Benefit ***by Installing*** **The New N. A. P. L.** **Uniform Accounting and Cost System**

A goodly number of Cost Manuals have
already been distributed

The Manual includes, ready for photographing:

1. Job Ticket.
2. Specification and Estimating Forms.
3. Forms to record time in various work departments.
4. Composite Monthly Summary.
5. Sales Book, Purchase Book, Journal with columnarized rulings with instructions on how forms should be used.

This System is available not only to members of the N.A.P.L., but to all others as well. If you are a member, complete instructions on the operation of the Cost System, plus a plastic bound set of forms ready for the camera, are yours for the asking. If you are not a member of the N.A.P.L., complete instructions on the operation of the System, plus a plastic bound set of forms, ready for the camera, are yours for the price of \$10. Just fill out the coupon below. Member or not, you cannot afford to be without this important new contribution to profitable cost-keeping.

PLEASE SEND CHECK WITH ORDER IF YOU ARE NOT A MEMBER
OF THE N.A.P.L.

National Assn. of Photo-Lithographers
1776 Broadway, New York City.

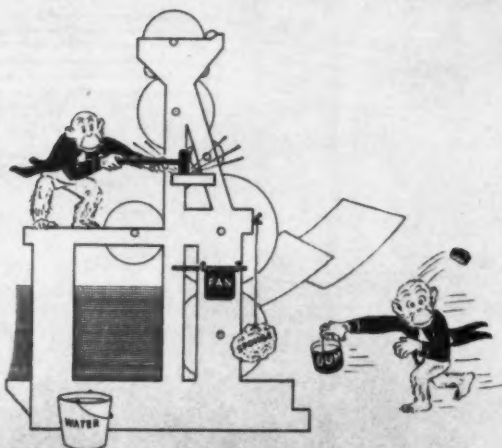
Gentlemen:

Please send me complete instruction booklet describing new N. A. P. L. Cost and Accounting System, together with a set of forms ready for the camera.

- ☐ I am a member of the NAPL.
☐ I am not a member of the NAPL and enclose check for \$10.

Name.....
Company.....
Address.....

●
NATIONAL ASSOCIATION
of
PHOTO-LITHOGRAPHERS
1776 BROADWAY NEW YORK, N. Y.



Take the
MONKEY BUSINESS
Out of Pressmanship

THROW AWAY

the GUM,
the SPONGE,
and the FAN

ATLAS LITHOGRAPHING COMPANY
Producers of High Quality Commercial and Color Lithography
930 NORTH AVENUE • MILLVALE BRANCH • PITTSBURGH, PA.
Phone MILLVALE 1400

December 27, 1940

Litho Chemical & Supply Co.
Pulitzer Building
63 Park Row
New York, N. Y.

Gentlemen:

Herewith find our order for an immediate shipment of Solio and Imperial Fountain Solution and Solio on our large and small presses with excellent results. We no longer find it necessary to gum up the plates during press stoppage. We just stop the press, put our load in, drop the dampener and run.

We also find that the use of Imperial and Solio materially lengthens the life of our plates. We no longer lose plates through gum streaks. Your products are genuine savers of time and money for us.

Very truly yours,
H. B. Shute
H. B. Shute
ATLAS LITHOGRAPHING COMPANY



Sold by All Our Dealers

FREE DESCRIPTIVE LITERATURE UPON REQUEST

LITHO CHEMICAL & SUPPLY CO.

63 PARK ROW, NEW YORK • BEekman 3-4973-4

*Winning
Friends
Everywhere!*

Tufhide

THE LATEST IN
METAL LITHO INKS

1. Unusual Flexibility
2. Fast Drying
3. Hard Drying
4. Easy Running
5. Wet Varnishing



Our nearest plant will be pleased
to arrange for a trial demonstration

Sinclair and Valentine Co.

MAIN OFFICE AND FACTORY: 611 WEST 129th STREET, NEW YORK, N. Y.

Albany
Baltimore
Birmingham

Boston
Chicago
Cleveland

Dallas
Dayton
Havana

Jacksonville
Kansas City

Los Angeles
Manila
Miami

Nashville
New Haven
New Orleans

Philadelphia
San Francisco
Seattle



We can't rest on them. We have to keep continually on the jump in order to prepare rollers to meet your immediate requirements. **TOOL-UP FOR TOMORROW!**

You have to hold your own in the competitive market of printing and lithography. The new things demanded of you in 1941 will tax your ingenuity and your plant equipment.

New inks, new presses, new processes—you'll need to know about the new roller materials, improvements in old materials, roller developments soon to be released—all designed to equip your plant properly for trouble-free and uniform presswork.

You will be looking over your rollers to see if they will meet your needs. If you are wondering whether you have the best roller equipment possible—check with Ideal!

Have you heard about the Ideal Durolith lithographic roller? It's made of vulcanized oils. Four times as strong as the original Ideal lithographic rollers. Accurately lathe-ground, it remains the same diameter throughout its life. For water control and quality printing of solids and fine detail this modern roller is tops in efficiency. Why not give it a trial?

IDEAL ROLLER & MANUFACTURING CO.

CHICAGO, ILLINOIS

Branch sales offices located in principal cities

LONG ISLAND CITY, N. Y.



WESTVACO INSPIRATIONS FOR PRINTERS

TIME stands still only in museums—never in the profession of advertising and selling. You who move America's goods must keep the minds of America moving to action . . . and must keep moving yourselves, in order that you may reap the reward of enterprise in the advertising world of today.

The antlered locomotive with brass steam chest and bright red wheels is now only a quaint and curious relic of the romantic past. It lives only in its reproduction. It moved . . . into the majestic streamliner of nineteen hundred and forty-one.

Keep Moving is the keynote of *Westvaco Inspirations for Printers No. 127*. In it, Deems Taylor, Edna Woolman Chase, Thomas Craven, Norman Bel Geddes, Laurance B. Siegfried, L. Andrew Reinhard and Lester Jay Loh, write of the things that make the present moment our *now* . . . this moving hour in which tomorrow's sales are planned and tomorrow's world is made.

There is inspiration—for you who create advertising—on every page of this new issue. It is a shocker-into-consciousness of what goes on today. Time stands still only on the cover . . . with the delightful reproduction of *Transportation in the Sixties*, shown above—from there on, things happen fast and profitably.

Westvaco Inspirations for Printers is not for sale. It is yours for the asking. Call your printer today and ask him to send you Issue Number 127. It will be on your desk promptly . . . and in your mind from the very first glance. In it is captured the spirit of today's selling—caught in the very act!

Printers of America! This insert, with copy exactly as shown above, will appear in the March issues of a group of advertising magazines. Your Westvaco Distributor will, upon request, send you a supply of the current issue, No. 127, in order that you may be able to forward copies, without delay, to those who ask for them.

WEST VIRGINIA PULP AND PAPER COMPANY
New York Chicago Philadelphia San Francisco



TRANSPORTATION IN THE SIXTIES. The 9:45 A.M. Accommodation, Stratford, Connecticut, by Edward Lamson Henry. From the painting in The Metropolitan Museum of Art

WESTVACO

ONE FARE
INSPIRATIONS 127
FOR PRINTERS
WEST VIRGINIA
PULP AND PAPER COMPANY



THERE'S MAGIC IN NUMBERS

Yes, there is good, sound, substantial, money-saving magic for lithographers in the fact that the Pitman Deep Etch Process has passed the ten-year mark—ten years of learning how the hard way, in offset plants all over the country. A little of this experience is packed into every bottle and can of the Pitman Deep Etch Products. If you have not tried the Pitman Deep Etch Process, now is the time. Write or telephone the office nearest to you. Complete details will be sent immediately.

HAROLD M. PITMAN CO.

LITHOGRAPHIC EQUIPMENT AND SUPPLY DIVISION

JERSEY CITY, NEW JERSEY—150 Bay Street

51st Ave. and 33rd St.—CHICAGO, ILLINOIS

Pacific Coast Representative . . . G. GENNERT, 1153 Wall St., Los Angeles, Cal.
Canadian Representative . . . LATIMER, Ltd., 90 Niagara St., Toronto, Canada

EDITORIALS

THE Amalgamated Lithographers of America last month began a national advertising campaign to explain lithography to the general public. What lithography is, how it is produced and misconceptions arising from various terms used to describe lithography, such as photo-lithography, offset printing, photo-offset, etc., are discussed in paid insertions in the advertising trade press. Later on, perhaps, general magazines will be included in the campaign.

This move on the part of the Amalgamated, a labor union with 13,000 members, about half of the total number of workers in the industry if the 1939 Census of Manufacturers is correct, is significant and important. Significant because it is a very clear indication of the political and social times we live in. Can you conceive of a labor union ten, fifteen years ago sponsoring an educational advertising campaign for their industry and paying for it out of their own pockets? Of course, as some aver, the Amalgamated's jurisdictional dispute with the Typographical Union may be what is really back of the campaign. In promoting the industry, the Amalgamated is making its own place in it more secure, they say. Maybe so. We still like the idea.

However, it isn't necessary to read any social or political implications into the advertising campaign of the Amalgamated in order to justify its importance. What the Amalgamated says about lithography, and how it says it, will be felt by lithographers from Bangkok to Walla Walla to San Diego to Miami. There is a great deal of confusion in the minds of the general public regarding lithography and there is much educational work to be done. If the Amalgamated Lithographers of America want to pitch in and help do some of that work, fine and dandy. We admire their foresight and attitude.

However, the right to speak your piece in public does carry with it a responsibility: it commits not only you, but those engaged in the same pursuits as you are. We are sure that

the Amalgamated appreciates that responsibility. But if we may be allowed a suggestion, we would like to point out that the letterpress industry has a very thin skin. Any mention of lithography, especially in the public prints, and if accompanied by assertions which may, in their opinion, be open to dispute, may provoke an argument, also in the public prints. Ordinarily, the lithographic industry would be the last to dodge such an argument. But there's that general public to be thought of. A public airing of rival claims would multiply his confusion. Witness the recent Presidential contest. Therefore, may we voice the hope that the Amalgamated will confine its advertising to educational copy only, for the sake of the industry at large? Sure, we're probably an old granny and have no right to meddle in the affairs of others, but, hang it all, our enthusiasm for lithography is as great as the next one's. And don't get us wrong, we're for the campaign!



WE talked to a fellow the other day who had just returned from a swing around the country. During the course of his trip he managed to visit about fifty lithographic plants in all sections of the country. They were all busy, he said. This was pleasing news. We asked if he knew the cause of it. Well, he said for one thing advertisers are spending more money. This was particularly so in the Middle West, he pointed out. Even those manufacturers who are engaged in supplying defense needs are not neglecting their old customers, but rather are intensifying their consumer advertising. He said many of them had gone through the last war, and like many others at that time, had curtailed peacetime promotion. Then when the war was over they found that their market had forgotten them. They were seeing to it that this would not happen again. The Middle West is preparing for peace as well as war.

Lithography and an

FEW people will dispute the axiom that "Man Bites Dog" makes for headline news! The Shell Oil Company of Canada's advertising for the past five years presents a similar news "high"—for our northern neighbors actually clamor for copies of Shell lithographed posters and collateral advertising, to the tune of many thousand requests each year. Quite a different picture from the average advertising promotion which tries so hard to devise new and fool-proof ways to force public attention toward its advertising efforts.

The Shell Company arrived at this Utopia of active public interest and good-will concerning its advertising

campaigns by the broad highway of painless and tremendously popular, though infrequently used, educational advertising. In daring to be different, by breaking accepted rules and bringing recognized fine art to lithographed poster advertising, they found a new, economical and astonishingly successful method of promotion. Fine art essentially called for fine lithography, printing and even engraving. For this type of campaign naturally suggested a large variety of related advertising material, such as postal cards, booklets, folders, finely lithographed library sheets, and small reproductions of the 24-sheet posters at the point-of-sale, engraved

invitations to women's groups, service clubs, schools and churches, inviting them to exhibitions of the original poster paintings, etc. In fact an entirely new world of outdoor advertising possibilities was opened up and proved of inestimable value in courting and capturing the good-will of the general public.

But for the sake of clarity, and a better picture of how this type of advertising opens up new uses for lithography, perhaps we had better trace Canadian Shell's advertising history back a few years to discover just when, how and why this promotional advertising evolution and revolution took place.

In 1929, when the Shell Oil Company

WORLD EXPERIENCE IN EVERY GALLON



Idea

HELPED SELL SHELL

by Porter F. Leach

of Canada began the retail distribution of petroleum products, it started its first advertising campaign patterned somewhat after those used by sister companies in the United States and other parts of the world.

At the close of this initial advertising campaign it was realized that a "me too" advertising story was not conducive to building up a permanent and successful business for a new petroleum marketer in an exceptionally competitive field. The company intensively studied its immediate marketing area with a special view to finding out the qualities and features the motorist most desired in gasoline and motor oil, and also what services he would like to have at the filling station.

Following those first advertising efforts, which were similar to those in use by companies in the United States, it was decided to stress advertising about products and services in an entirely different manner than that featured by other Canadian companies. For instance, a sealed and bottled motor oil was introduced to the Canadian public by featuring the slogan "See What You Buy." This was followed up by sealed gasoline, "The Gasoline You Can Trust." For at this particular time the company's surveys pointed out that

many consumers believed there was a great deal of substitution going on in the retail gasoline business. Therefore, Shell proceeded to seal the underground gasoline storage tanks at each service station, and featured the sealed gasoline story in all of its advertising. Good dealers liked the idea, bad dealers didn't and were replaced with others who recognized the power of such an outspoken campaign.

This idea of warning the motoring public about gasoline and motor oil substitution was further promoted by a subsequent campaign featuring the sealed idea. Using the slogan "Don't Guess . . . Don't Gamble . . . Get Shell . . . It's Sealed!" This series presented lithographed posters illustrating a magician pulling a rabbit out of a hat; a

close-up of a pair of human hands playing a game of stud poker; a still-life illustration showing dice rolling out of a leather dice box; another, an enormous pair of eyes, with the slogan "See What You Buy"; and still another showing a large head of a man blindfolded.

All of these lithographed poster messages emphasized the dangers of the substitution angle, which was entirely different from any advertising used by competitive companies at that period. This unique and daring idea caused a great deal of comment and created much favorable publicity for the company.

As Canada is an extremely large country with climatic conditions of extreme variation during certain times of the year, this was followed up by a seasonal gasoline campaign wherein the

In daring to be different by breaking accepted rules and bringing recognized fine art to lithographed poster advertising, Shell Oil Company of Canada found a new and astonishingly successful method of promotion.

WORLD EXPERIENCE IN EVERY GALLON WORLD EXPERIENCE IN EVERY GALLON



specifications of the gasoline were definitely changed each spring, summer, fall and winter, and a signed guarantee-card of such procedure was attached to every gasoline pump. This feature was publicized in all advertising and constituted the first attempt to put the seasonal style idea in gasoline advertising. At this time Shell was the first Canadian company to sell, feature and advertise a climatically controlled gasoline.

DURING this period, a standard method of servicing the customer's automobile when he came into the station was started, which was known as "Seven Point Service." This service not only assured the motorist of having his tires examined to be sure that they were properly inflated, but made a routine practice of having the service station attendant clean the rear view window, the headlights, and both sides of the windshield, as well as making a point of seeing that the attendant also checked the battery, looked at the radiator to see if it needed water, and also made a quick examination of the oil in the customer's car to see that it was at a safe level. This service of course made it possible for the alert station attendant to make many additional sales of tires, batteries, electric bulbs for the headlights, together with radiator flushing jobs, grease jobs and oil changes.

This standard procedure for servicing the car at the gasoline service station adopted by Shell a number of years ago, has since been used with some variations by most of the leading oil marketing organizations throughout the world.

In its search for other consumer marketing points which could be featured in its advertising, Shell realized that it was necessary continually to present new ideas about its products and services which were not used by

competitors. Realizing further that the Shell organization was marketing in 56 countries throughout the world, it originated its now famous "World Experience In Every Gallon" series of lithographed posters, setting a new style for petroleum companies' advertising, and leading the way toward a five year series of advertisements, largely lithographed advertising, by the way, which made the slogan a familiar and effective one to the vast majority of Canadian motorists.

In this age of fast automobile travel it is more than ever essential that the ordinary poster message register in a few seconds—but Shell's were no ordinary poster messages! In direct contradiction to this generally accepted fact, the Shell "World Experience" campaign at once set out to defy all the rules of poster design when it inaugurated its series of people, costumes, animals, birds, fish and dogs of various countries throughout the world, which was later followed up by characteristic world-wide silhouettes, flags, ships, airplanes and postage stamps. To illustrate the effectiveness of this radical departure from the accepted theory of poster design, one motoring family was seen to pull over to the side of the highway, actually stop the car, get out, and walk over to one of the stamp posters in order to read carefully the name of each country represented. You can be sure they will remember Shell!

Other examples of teachers taking their entire history classes out to see lithographed posters illustrating ships, birds and animals from all parts of the world, were frequently encountered. The director of one of the largest Canadian colleges for teachers requested the company to forward small reproductions of the posters to all attending the school's summer classes.

In designing posters presenting a

"world interest" theme, it was found that subjects of universal interest also proved interesting to the individual. Therefore schools, universities, libraries, clubs and churches started to ask for copies of these unique and interesting educational posters, finding them to be of especial value for their absolute authenticity of line and color. Of course, they were all lithographed.

Continuing along this line in search for subjects that would prove both interesting and relevant to the slogan, "World Experience in Every Gallon," the company started its now well-known series depicting the "Seven Original Wonders of the World." This poster campaign, like that of previous years, proved so unusual and interesting that the company began receiving requests for copies of the posters from universities, schools, clubs, libraries, teachers and individuals to the record-breaking figure of 15,000 to 20,000 a year.

When it is realized that the total population of the Dominion of Canada is only that of Greater New York City, and a large portion of the Canadian territory is not covered by the company's retail distribution, the unusualness of the large number of requests for copies of the advertising can be readily appreciated.

To further spotlight and call attention to the "Seven Wonders of the World" series, the company used a unique and carefully designed contrasting color idea for this entire series of posters. Working with the Shell Company, International Printing Ink's Laboratories donated the use of their spectro-photometer to make sure that the contrasting colors used in the lithographed posters were scientifically correct.

Perhaps quoting from one of the many publications which commented on the colorful art work of the "Seven Wonders of the World" advertising cam-

WORLD EXPERIENCE IN EVERY GALLON WORLD EXPERIENCE IN EVERY GALLON



paign would be somewhat helpful and explanatory:

"Colors of maximum contrast within limitations set by light fastness qualities were used for each design. Since the 'Seven Wonders of the World' were subjects offering excellent possibilities for unusual reproduction, a spectacular and unconventional color scheme seemed entirely appropriate. The story of how it was achieved brings out several facts significant to artists and designers, advertisers, printers and lithographers and others who must deal with color.

"Mr. Leach and his artist-designer, Jac deC. Leonardo went to the International Printing Ink Color Laboratories to discuss the colors they were seeking. For this unusual job, Mr. Leonardo had already been called upon to act not only as an illustrator, but as an architect and occasionally, as an amateur archeologist. The effects to be achieved in the campaign were entirely distinctive, and it had been impossible to work out an appropriate color scheme using orthodox pigments." (From *Professional Art Magazine*.)

THIS strikingly effective campaign caused so much comment and brought so many requests for copies of the posters that the company had an elaborate lithographed illustrated brochure produced, which dramatically told the authentic story of the "Seven Wonders of the World." Hundreds of thousands of these popular booklets were distributed to schools, teachers, libraries, clubs and homes throughout the Dominion of Canada and the United States.

To further this educational advertising work, the company also prepared a series of full color library sheets illustrating the "Seven Wonders of the World,"

accompanied by a concise description of the particular wonder pictured. The entire series of these were furnished libraries and schools and teachers upon request, and many thousands were distributed before the supply was depleted.

During this time the company found that it could greatly intensify the effectiveness and remembrance value of its advertising campaign by coordinating its sales efforts with the unusual posters. The first attempt to do this was with the "World Experience in Every Gallon" series, with illustrated lithographed post cards from various parts of the world, which were mailed to a list of prospects furnished by service station dealers. These post cards were actually stamped and mailed from the country featured in the card's illustration. The mailings received so many favorable comments that this idea was repeated in connection with the "Seven Wonders of the World" series, by mailing cards with poster reproductions from the city nearest to the location of the original wonder illustrated. For instance, the poster card about the Sphinx and the Pyramids was mailed from Cairo, Egypt, the Colossus of Rhodes from the Island of Rhodes, the Hanging Gardens of Babylon from Bagdad, Iraq.

To do this, it was necessary to make special arrangements with the consulates of the various countries from which the mailings were made. After numerous interviews and consultations this was accomplished. Although the company lithographed and addressed the cards on this side of the Atlantic, they were actually shipped to, stamped and mailed from, the particular country illustrated on the card.

This popular advertising caused so much comment and was so successful that the following year the company presented another "World Experience"

lithographed poster series depicting children from various parts of the world, dressed in colorful traditional costumes against a background typical of the country illustrated. As in the previous year's "Seven Wonders" campaign, in which the various collateral material had proved so much in demand a more elaborate lithographed booklet was prepared to illustrate the "Costumes, Customs and Countries of the World," with full-color reproductions of the brilliant posters used that year. Lithographed colored post cards were also used again as in the previous year.

Since the inception of its poster advertising campaign in 1929, the company has used three feet by five feet service station standards at the point-of-sale, upon which are pasted small lithographed reproductions of the 24-sheet posters, tying in the outdoor campaign at the point-of-sale, and in the off season using these 3' x 5' lithographed posters to carry advertising for various specialties—such as fly spray, lubrication jobs, anti-freeze preparations, furniture polish, cleaning fluid, motor oil, tires, batteries and other by-products manufactured by the company.

From the outset the company has realized the effectiveness of showing in full color its Shell trade-mark in its advertising, and as the poster medium is ideal for this purpose, the company finds this method of advertising to be especially helpful in indelibly impressing the trade-mark on the minds of the motorists. This is doubly effective when the pictorial treatment of the advertising is designed to include the trade-mark as an important and integral part of the pictorial design.

While Shell is not the largest advertiser in its operating territory, its far-sighted managerial policy of coordinating all advertising efforts, has succeeded in making its slogan and its publicity

the best and most favorably known petroleum product advertising in the Dominion of Canada.

IT IS a generally accepted fact that it is always easier to sell an outdoor advertising campaign when it is made the keystone of the company's advertising efforts, rather than tagging along in the wake of periodical, newspaper and radio advertising, and used as an auxiliary, make-shift addition to other types of advertising, or merely as reminder advertising.

By making the lithographed poster advertising campaign the dominant theme in the company's promotional efforts, it is only logical to have its auxiliary advertising tied in with the outdoor advertising, due to the effectiveness and availability of full color without additional cost. This feature has already been adequately described in another part of this article, wherein the Shell 3 x 5 advertising at the point-of-sale, post-cards, booklets, folders and other promotional matter distributed at the service station were coordinated with the main theme of the poster campaign.

The educational aspect of this type of advertising is of course evident from the thousands of requests for copies of its advertising the company has received, and it is gratifying to know that a large proportion of schools and libraries located within districts in which the company operates, uses Shell collateral material as an important part of its regular day-to-day equipment. Due to the attractiveness of the Shell advertising, teachers, librarians and school principals virtually act as the company's unpaid publicity agents by suggesting that the children have their parents go into the nearest Shell service station with them so that they may obtain booklets for their own personal use.

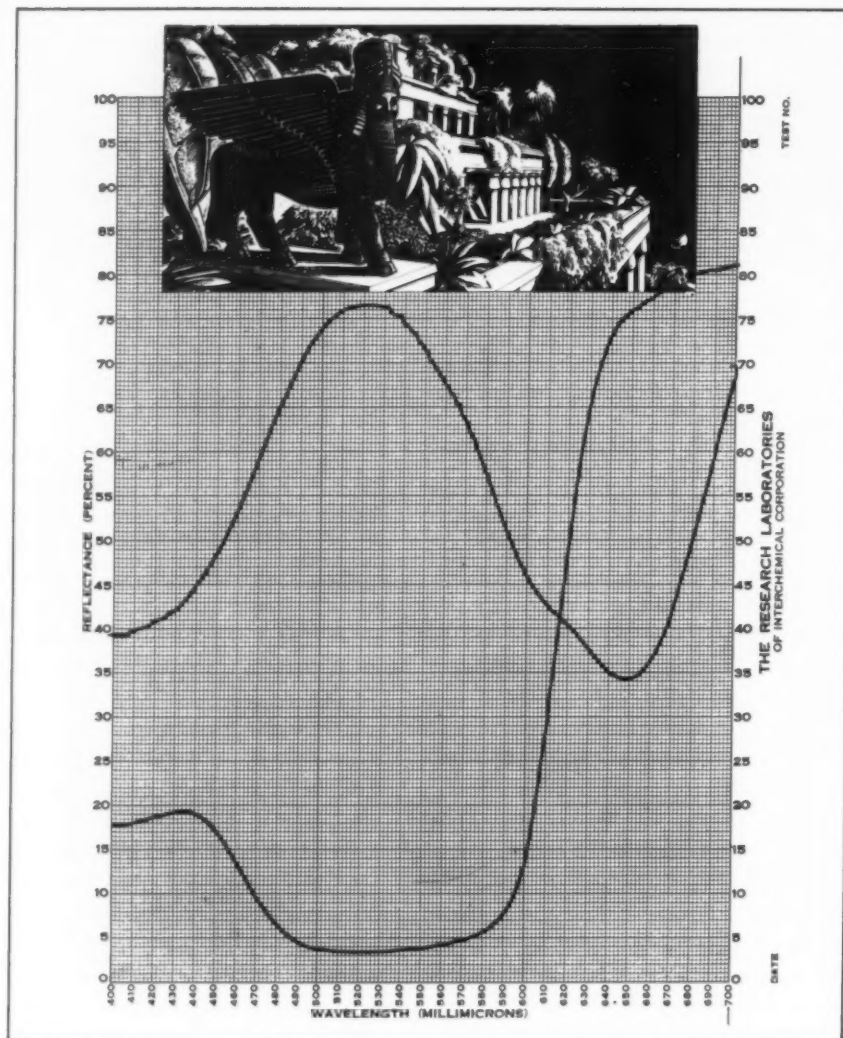
The company has also realized that to make its campaign fully effective it first of all must sell its advertising to the entire personnel of its organization. With this idea in mind, a direct mail campaign employing lithography is used illustrating the various poster designs and other promotional material currently displayed, and requesting all employees to explain and talk about the advertising to their friends and neighbors owning cars. In this way each

employee acts as a sounding board for the company's advertising campaign and feels that he is doing his part to put it over and sell it to the public.

At the present time so many Canadian organizations have requested copies of the collateral advertising, that many thousands are constantly doubly-reminded regarding the products when they see the actual poster on the boards and advertisements in the papers.

For like other alert advertisers, the company realizes that today's competitive business world demands that the advertising campaign, as well as the

product, be merchandised. The big job to be accomplished is the securing of a coordination of ideas between the man who buys advertising and the man who sells the product. This means that not merely the manufacturer's own sales force must be sold, but the wholesale and retail distributor's as well. A closer understanding of the need for coordinated advertising between the people who do the manufacturer's advertising, and the people who sell his product will unquestionably result in more profitable sales volume per advertising dollar expended.



The colors used in Shell Oil's "Seven Wonders of the World" posters were all in complete contrast. To achieve this contrast the designers consulted the IPI Color Laboratories. The contrasting properties of colors were tested on the recording photoelectric spectrophotometer, the automatic color measuring machine in the Research Laboratories of Interchemical Corporation, IPI's parent company. In producing the "Hanging Gardens of Babylon" poster, shown here and on the cover, spectrophotometric analysis showed that green (upper curve) and magenta (lower curve) were in complete contrast, being almost exact opposites.

The Sales Manager

AND HIS STAFF

How do they work together? Following up our December article on "The Salesman's Daily Report," we asked a number of lithographic sales managers what kind of a report—if any—they used. Here are the answers.

HOW does the sales manager of a lithographic firm keep in touch with what his salesmen are doing? Through daily reports? Weekly reports? Monthly reports? By means of scheduled conferences? Group sales meetings?

These questions were prompted by an article which appeared in December's issue entitled, "The Salesman's Daily Report," by E. W. Nobbs, manager of the Printing Industries Association, Los Angeles. Citing the need for systematic, regular reporting between the sales manager and his staff in the interests of efficient selling, Mr. Nobbs rather favored the daily report as the means of providing the necessary contact. Having given thought and study to the question, and drawing on the experiences of members of his trade group which had come to his attention, Mr. Nobbs offered a suggested form that the daily report might take.

Those who read Mr. Nobbs' article must have agreed with him that there is a need for some kind of a salesman's report, as an aid to both the salesman himself and his company. The question is what kind of a report and how frequent. It probably occurred to many, as it did to us, that in the lithographic industry, with its variety of products—24-sheet posters, displays, direct mail,

catalogs, folders, broadsides, etc.—and with its differently geared sales organizations—some specializing in one type of product, others set up to handle all types, including letterpress—that it would be difficult to strike a standard that would be applicable to all.

That is not to say that Mr. Nobbs' suggestions were not provocative and constructive. They were indeed, and we hope readers took them to heart, particularly the so-called black and white lithographer.

But what sort of a report, if any, is actually being used now by lithographic sales managers?

To find the answer we queried a representative group.

Of those replying, 60 per cent said they did not favor a formal, daily report from their salesman. The remaining 40 per cent did require of their salesman a daily report of some kind.

Those making up the 60 per cent group were composed of lithographers specializing chiefly in the production of posters and displays. Those in the 40 per cent classification were in the main composed of lithographers producing nearly every type of offset printing, except posters and displays. Among this group were also a few who produced letterpress printing.

The following are some of the com-

ments which accompanied the answers to our questionnaire. They form an interesting supplement to Mr. Nobbs' article. In each case names of companies have been withheld.

The first is from the sales manager of a large lithographic firm well-known as a producer of lithographed displays and posters:

"OUR policy has never been one of favoring report forms filled out and sent in by our representatives. Our sales organization extends over the entire United States and our theory of sales direction is one individually geared to each representative and to the specific needs of him as an individual and of the territory in which he operates.

"Reports sent to us by our representatives cover specific accounts and the situation in regard to each account. We encourage our representatives to give us detailed reports on each situation as it exists and often our reports may be two and three pages in length. We have no interest in the weather reports which are likely to be the result of using set forms.

"Our theory of organization is that the home office has one fundamental purpose and that is to help salesmen get business and, therefore, we do a tremendous amount of correspondence with each salesman augmented by visits from our plant executives . . . all of this being aimed at securing

pretty true story every quarter, particularly after the first year when a comparison of the volume received each month can be made with the previous year.

"I expect by now you have discovered a dozen ways to beat the system, and that is what everybody thinks when they first see it, but the salesman's own figures take care of that. First is the problem of getting the reports in regularly and that is handled by refusing to approve expense accounts until all reports are up-to-date. Then comes the problem of getting true reports. While that can not be accomplished as easily as getting reports made out, it still is possible.

"When the plan is first adopted, the reports will be full-to-overflowing with calls. The management is going to be shown how hard their salesmen are working, but if, at the end of three months, a lot of time has been recorded and the business received does not warrant the time involved then either too much time has been spent on the account or there is a poor salesman on the job. The latter inference hurts a salesman more than anything else that you can do.

"For the second quarter the men are very careful to keep their time low so they can show the management how well they sell with a minimum of of time spent on each account. Of course, this reveals a lot of unaccounted-for time which is hard to answer. Remember, there can be no argument because you are working with the salesman's own figures.

"By this time the average man becomes conscious of what reports reveal and, in most cases, becomes interested in getting the most for his time. One way to help him conserve time is to have him list the frequency with which each account should be contacted—daily, weekly, bi-monthly or whenever it should be. Then a 'Must List' is prepared and given to him every Saturday morning. The 'Must List' consists of everybody who should be called on the following week. These names are taken from his original list and from his daily reports. Given to him at the Saturday

morning sales meeting, he has a reminder of the problems facing him during the next week.

"With the 'Must List' pushing him all week, he will be surprised to see the number of calls that can be made between 8:30 and 9:00, 11:30 and 12:00 and between 4:00 and 5:00. To me this is the biggest thing any system can do for man. No matter how busy you are, there always seems time to get in one more call if you think it is necessary.

"A simple way to secure prospecting is to first determine the number of prospects a man can see each week and add that number of blank lines to his 'Must List' which he fills in with the prospects called on during the week.

"I wish that I could say that this plan was a cure-all for sales managers and that the adoption of it would make his life a continuous round of golf and beautiful thoughts. But I'm sorry to say that it is not. By the use of contests to keep up enthusiasms and a sympathetic consideration of the salesman's problems, especially those problems which should and can be corrected by the management, a more efficient and a more profitable sales program can be conducted."

The following lithographic firm has just recently re-organized its sales organization:

"AS you know, our Sales Promotion Department has just started to function and the Sales Manual and other material of this nature are just being completed. However, due to the nature of our business, we have found it impracticable to operate on a basis of daily stereotyped reports from salesman.

"We do require, however, that all salesmen keep in constant touch with us by mail or phone, so that the facilities of our organization may be made immediately available to our men in the field in solving any sales problems which may arise."

Specializing in the production of creative advertising, principally dis-

plays and posters, this firm has an enviable sales record:

"WE do not require our salesmen to make out daily or weekly sales reports because we feel that they are, or should be, sufficiently interested in each of their accounts to contact them regularly. Each man, however, is supplied with a file box, with cards for each of his accounts, and on these he is requested to keep a record of his activity with each account. Our idea in this is that, if a man is away due to illness or vacation, we are able to check the status of an account without difficulty.

"While, as I say, we require no regular sales reports, we do exercise close supervision over the sales force—particularly in connection with their promotional activities and sketching expense. In addition, we have an informal sales meeting weekly and a regularly scheduled monthly meeting, at all of which sales problems—specific and general—are discussed.

"Naturally, we expect our men to contact their accounts regularly and if, for any reason, they don't seem to get anywhere with a particular account, we frequently assign it to another man. Also, we give more time and attention to new salesmen to see that they get started properly along the lines of our general company policy and so that they have every possible opportunity to make good for themselves and the company.

"We have found that the policy outlined above—however casual it may seem on paper—works satisfactorily with men such as ours, who are interested in their jobs and the company's welfare."

Lastly, the report of a sales manager for an organization producing a diversified line of lithography:

"WE keep a very complete record of sales activities of each of our salesmen so that from time to time we are able to check their progress with accounts and prospects.

"Part of this system involves the
(Turn to page 65)

Fig. 3A

NAME	Day	1 DIRECT ADVERTISING A Folders B Booklets C Broadside 2 POSTERS 3 DISPLAYS A Cutouts B Streamers C Giant Ads 4 CATALOGS 5 DEALER HELPS A Manuals B Sales Portfolio 6 MISCELLANEOUS
COMPANY	DATE	
ADDRESS		
INDIVIDUAL		
REMARKS		
NAME	Day	1 DIRECT ADVERTISING A Folders B Booklets C Broadside
COMPANY	DATE	
ADDRESS		
INDIVIDUAL		

Fig. 3B

TYPE OF BUSINESS	
RATING	SPECIAL REMARKS
CLASS OF A/C	
ADV. APPRO.	
BUYING PEAK	J F N A M J J A S O D
SUBSIDIARIES	
ADD TO MAILING LIST	
TYPE OF BUSINESS	
RATING	SPECIAL REMARKS

Wanted

A METHOD

EDUCATION gained through trial and error has certainly helped to familiarize successful shopmen with the desired qualities to be looked for in separation negatives. A life time of experience should help to qualify a man to judge the correctness of the separation achieved from the many colors met with in practice. And until some better method than rule of thumb for determining this is perfected, we shall have to be content to go ahead with the expense of completing a job to the proofing point before we are able to say whether our negatives are right or wrong.

Photography and most particularly color photography cannot as yet be treated mechanically. We can set our cameras both for size and focus by accurate mechanical devices. We can determine the strength of our lighting by accurate electrical meters. We can maintain lighting current within negligible limits, control the temperature of solutions and the chemical strength of our bath, but photographic emulsions and their responses still remain empirical factors. Any process, therefore, which involves several photographic steps, is subject to vagaries outside an operator's control. Not only are these unpredictable, but the results are difficult to anticipate or analyze, since any one of many factors are involved.

Considering the expense of the complete process and the difficulty, time and expense involved in corrective work, any check-up which can be made at intermediate points is most likely to

prove a considerable economy. The most important check to be made is that of color separation mentioned before. It is practical to retouch negatives and positives alike to correct for color variations, and it is much more practical to make these corrections at that stage of the process than at any other point. A method, then, of ascertaining with reasonable accuracy whether or not a set of negatives will yield a satisfactory reproduction is greatly to be desired.

There are two methods now in general use for making color prints photographically. They are the Carbro and Wash-Off Relief methods. Both as practiced at present require much time.

The Carbro Process involves the preparation of bromide prints from each of the separation negatives. These are then used to selectively harden bichromated gelatine tissues. The gelatine contains the coloring matter. The hardened or insoluble portions of the gelatine can be made to adhere temporarily to waxed celluloid. All the remaining soluble gelatine is washed away with hot water. The three image elements are then successively caused to adhere in register to a specially prepared paper support. In order to meet certain problems of registration, this support is only used as a temporary base, the complete composite being finally transferred to a heavier permanent paper support.

The actual work time in carbro may not be so very excessive, but the necessity of many intermediate soaking and

drying operations does consume a great deal. Any efforts at short cutting, eliminating some of the drying operations, etc., have always been found to add to the difficulties, adding more time than was saved. Practically all carbro workers today are using forced drying in one form or another, but it is still impossible to bring the elapsed time for making a print within practical limits. By overlap operations, making several prints at a time, it is, of course, practical to consider the whole time as devoted to several prints, thereby obtaining efficiency. However, we are concerned with the elapsed time from the dried separations to a positive approval, or disapproval.

The time element may therefore rule carbro out for our purpose. Careful analysis of the process reveals no startling possibilities of improvement being made in this direction. From the point of view of color rendition, reliability and the availability of experienced workmen, it is the superior process at present. The time element, however, is important and cannot be overlooked. Other qualities could to some extent be sacrificed in favor of speed. It would, on the face of it, seem logical that by offering better quality and greater reliability, a house could afford to require 24 hours more time. Nevertheless, we all know that those extra 24 hours all too frequently will cause the order to be taken to another shop.

Does the Wash-Off Relief process then fit our needs? In so far as the time element is concerned the process in-

True, there are the Carbro, the Wash-Off Relief, the Chromatone and the Dye Coupling methods, but each has disadvantages in time, reliability and control.

OF MAKING COLOR PRINTS

by Elbert H. Ludlam

volves perhaps 30% less time than Carbro. This is still, however, long. At best, 5 to 6 hours working time are required. Thus, for practical purposes, a day is still lost. In this process a special film of soft gelatine emulsion is used for making positives from the separation negatives. When the silver image is later bleached in the presence of acidulated bichromate, the gelatine immediately surrounding the silver is insoluble. When the image has been printed through the film base, the soluble gelatine can be removed in hot water, the insoluble portion adhering to the base.

The silver salts are then removed, and the film (called a matrix) cleared and dried. This matrix will absorb certain dyes under controlled conditions. The absorbed dye can then be caused to transfer from the matrix to a prepared support. Much of the time involved is consumed here and recent improved dyes are helping to speed this process up. Nevertheless, it cannot be said to be ideally satisfactory. Even at best it is a lengthy process, involving many steps into which errors and irregularities may creep. For our purpose a shorter process offering greater possibilities of standardization is to be desired. The Chromatone process at first glance appeals from this point of view. It is shorter and in-

volves less apparent chance for variation.

SPECIAL collodion stripping paper is used in this process. Positive prints are prepared on this paper from each of the three negatives. The silver of these prints is then converted to colored metallic salts. The blue green is a cyan or iron salt. The magenta is nickel di-methyl glyoxine and the yellow cadmium sulphide. The processing is fairly rapid involving no intermediate drying operations. Three hours would be ample time for completion of a print. Unfortunately the toning processes involved do not seem to lend themselves 100% to standardization and the time element can be bettered by the last of the four major processes practiced today.

This is the Dye Coupling Development. As its name implies, the color of the final image is obtained from dyes. The process might better be described as Dye Forming Development, for that is what takes place. The silver image is developed as in other photographic processes but with this exception: coincident with the development of the silver, dyes are formed in situ. That is to say that wherever silver is formed by development, a proportionate amount of a dye is formed at the same place. The silver image can then be bleached out leaving the dye image alone.

The dye image thus formed cannot be transferred into another gelatine layer. However, by using the collodion stripping paper as in the Chromatone Process, the three color elements can be readily superimposed. The time element involved in this method is not as great as in black and white printing, for the use of collodion film and the fact that the paper itself is not used cuts down washing time to an absolute minimum. Complete registered prints can readily be made in an hour's time. Certainly well within our practical limits.

Does the process therefore compare favorably with others as to quality and reliability? As yet this cannot be said to be true. In fact it is hoped that this article will arouse sufficient interest to hasten the necessary research and improvement. The obvious advantages in time, reliability and control make it essential that the process be perfected as rapidly as possible. I am speaking here of a process for which materials are already marketed and in use, not of mere theoretical research. Color development has become familiar among photographers as a result of the tremendous interest in Kodachrome transparencies. It is a very new thing in practical photography. However, the yellow stain obtained in pyro develop-

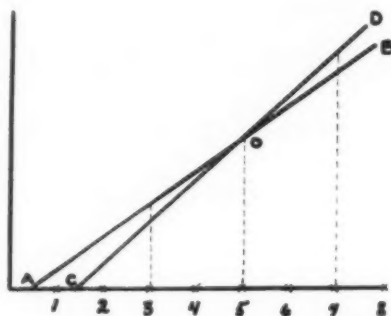
ment is a color-developed dye, and it has long been known that bleaching the silver out of these negatives leaves the complete image in dye form. Color forming development as practiced today is merely an improvement over the pyro stain.

In our work we are familiar with the action of bichromate. Here two reactions take place but one is always dependent entirely on the other. Thus, in Carbro and similar processes silver is bleached in the presence of the bichromate. Coincidentally gelatine is hardened. In color forming developers, silver is developed from the latent image. Coincidentally a dye is formed. To be practical the quantity of this dye must bear an immediate relation to the quantity of silver developed. It must remain in situ, and it must be a stable dye of a specific hue. Furthermore, we must always obtain the same amount of dye when developing the same amount of silver. This has proven a sizeable order for the research chemist. It was first successfully obtained in Kodachrome transparencies. Adapting the process to paper prints has proven more difficult because the densities and dye concentrations involved are infinitesimally smaller. Its first successful accomplishment has been due to an independent research chemist. (Incidentally a man of long experience in lithography and textile printing.)

The process is one of balance depending for its success on the delicate timing of reactions. Since the formation of the dyes must be entirely dependent upon the formation of the silver image, the silver must be formed first. It is natural that the dye formed be proportional to the silver, but this proportion must be such that the visual characteristics (densities) closely approximate that of the silver image.

The ideal condition, of course, would be that in which the dye formation and the silver image had identical visual values. Since there is a delay between the start of silver development and the beginning of dye formation, the chemical balance must be so arranged that for any given quantity of silver developed a quantity of dye is formed slightly in excess of a visual match. The color formation will, therefore, proceed at a slightly higher rate and will at some predetermined point match and then

exceed the silver formation. The following diagram will perhaps help the visualization of this relationship.



Supposing that line A to B represents the proportion of the silver image already formed at any moment during the course of development. As pointed out above, the dye does not begin to form immediately. This inertia or lapsed time is represented by the point C, and line C to D represents the corresponding formation rate for the dye image.

Just so long as the dye continues to form in the same ratio to the quantity of silver developed, these two lines must cross at some point O regardless of the exposure and development characteristics of the material being used. It is in knowing this point of stability and in using a process properly designed for such stabilization that the successful determination of color separation depends.

The only process of this nature which to my knowledge meets this requirement of stability and reliability is a marketed product known as Iso-Color. It is at the present time being offered for use as an amateur color printing process, but it should go far towards supplying our need as soon as its inventors can offer an improved red or magenta color.

THIS brings up the question of whether proofing with the dye colors available will be of value unless they match the inks quite accurately. Paraphrasing this question opens a very interesting aspect in color analysis. Given a reproduction made with one set of colors, in what way will a reproduction made with a different set of colors vary from it? Separation technique may be considered either from the point of view of the admixture of colored light reflected from stock and inks, or as the subtraction from white of certain

colors in varying proportion by the inks, etc. It is easier to visualize the effects of variations in printing colors, etc., if we make our analysis on the basis of the absorption of color. Yellow, for instance, is close to ideal in its ability to absorb the blue colors without simultaneously absorbing any appreciable proportion of the greens and reds. There are, however, variations in yellows ranging from lemon yellows to orange yellows. All these at optimum strength absorb the blues efficiently. Lemon yellows, however, do not efficiently absorb the blue greens while orange yellows not only absorb these colors but some of the greens as well.

Suppose then we have a combination of ideal colors for our test and they indicate satisfactory reproduction. We then use final inks in one case, including a lemon yellow instead of the ideal, and in another case we use an orange yellow. The lemon yellow, failing to completely absorb the blue greens, will leave all green colors a trifle lighter in tone than the ideal colors. The orange yellow, however, absorbing some of the green itself will yield a color of darker tone than the ideal color. There is in either case very little shift in hue or color, the principle effect being on the brightness or tone of the color. In very similar manner blue green inks vary. Some absorb too much of the blue, others too much of the green and some absorb too much blue and green, efficiently passing only the blue-green proper. These latter, although visually apparently satisfactory, cannot with success be used for subtractive reproduction. We seldom, on the other hand, meet with blue greens which pass too much red. Where the blue-green ink absorbs too much of the blue, it will darken the blues. If too much of the green, it will darken the greens. Similarly if the magenta (red) ink absorbs too much blue, it will darken them. If it absorbs too much red, it will darken all red colors.

In general then, the effect of variation between the colors used for the test and for the final inks will be fixed. By analysis of the first few jobs tested in this manner, the small variations will quickly be learned. The major purpose, however, of determining the over-all efficiency of separation will have been

(Turn to page 63)

Practical

pH CONTROL

by Norman C. Mack

MUCH has been written about pH control, what it is, the meaning of the pH scale, the use of pH indicator fluids, etc. In a recent issue of MODERN LITHOGRAPHY there was an excellent technical article on the subject by Frank McCrumb, of W. A. Taylor & Company. Therefore, I will not burden the reader by repeating Mr. McCrumb. I would like, however, to say something about the practical application of pH control in the average litho shop.

In the past year and a half I have consistently used a pH control slide-comparator unit for practical troubleshooting in lithographic plants of every kind and description. I have made more than 2,000 tests in this period of time on fountain etches and plate coatings. From the data compiled from these tests, some of the following observations may prove helpful to the reader.

The pressroom seems to be the principal source of grief, largely because the production of lithography involves the use of many types of paper and many colors of ink. There has been much discussion, for example, concerning red inks, and the necessity for increasing the acidity of the fountain etch when running this color.

It may surprise you to learn that on more than 70% of all the press fountains tested during the past year and a half

when red ink was running, the readings showed acid intensities of 5.0 to 6.8, representing strengths of 100 times that of pure water in the case of 5.0 readings, and 2 times the strength of pure water in the case of 6.8 pH. Yet the recommended acidity is 3.8, or 2,000 times the strength of water testing 7.0 or neutral.

The greatest need of the average plant is consistent use of a standard fountain mixture throughout the shop. The etch can be mixed in 5 gallon lots or more, depending on the needs of the pressroom. The acid value can be predetermined by using the Bromcresol Green slide comparator, giving acid readings between 3.8 and 5.4. I suggest that ½ ounce of phosphoric acid, added to the 5 gallons of mixture, will give a good start toward the 5.4 reading. One can add additional amounts of the acid to obtain greater strength, if necessary,

after a reading is made of the formula containing the ½ ounce of phosphoric acid.

By using a standard fountain mix for all presses—where a plant operates more than one—chemical reactions are held to one and the possibility of variations held to an absolute minimum. Of course acidity can be varied to suit each particular press, if necessary, by adding nothing more than phosphoric acid. By following such a standardized procedure, the chemicals and quantities used are the responsibility of the superintendent. This should do much to eliminate guessing and confusion when the fountain etch is suspected as a source of trouble.

Many plates have been prematurely ruined by excess acidity, due to the high corrosive action of the fountain etch. All acid reacts to zinc plates to form zinc oxides. This action gradually dis-

In which examples of the practical application of pH are described, based on some 2000 tests made of fountain etches and plate coatings in a wide number of lithographic plants.

solves the grain and destroys the affinity of the plate to accept water. When this ability of the plate is destroyed, naturally, filling of halftones and bleeding of solids result. There is no distinction between the deep-etched plate or the albumin plate under these circumstances, as both will act the same when the grain has been destroyed. Thus, an exact knowledge and control of the acid content of the fountain is of primary importance in order to obtain sharp halftones and clean solids, regardless of the length of run.

High acidity in the fountain also attacks the color value of the ink. The greater the acid strength, the more easily does it break down the resistance of the ink to water. The result is emulsification, or the formation of tiny ink globules that ball up on the distributors, preventing even coverage of the form rolls and resulting in off-tints. Many times, because of this condition, the image on the plate is blamed for not taking the ink.

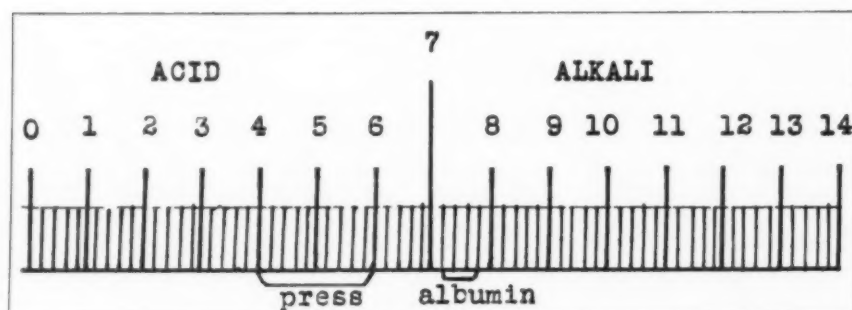
That excess acidity causes trouble is well known. But the average lithographer seldom takes the trouble to find out why trouble occurs or what can be done to prevent it.

Not so long ago, while I was out on a trouble-shooting job, the superintendent and a pressman were having trouble on a particular press. They were puzzled over a partial bleeding of the solids and the apparent walking away of the finer dots in the halftone. In places the plate was printing perfectly, but in two separate places, each about the size of a dollar bill, the plate was acting up as described.

Now a good deal of guesswork usually takes place in situations such as this. Sometimes the press manufacturer's representative insists it is the grain on the plate, while the pressman and the superintendent insist it is either the fountain or the plate image. Or the platemaker, on the other hand, insists that since his other plates are running perfectly on the other presses and that this plate was made the same way, certainly, it is not the plate. Ink is ruled out because distribution is good and the color was OK where the plate did print.

What is the trouble?

My experience with pH has taught me that *excess* acid in the fountain



Recommended acid-alkali balances for offset

could cause a fadeout of the halftone dots by attacking the coating. It has also taught me that if the acid strength is *too low* it will allow the image to bleed. Therefore, the first thing I always do in cases of this kind is to test the fountain and determine the strength.

IN THE particular case I have in mind, the pH reading showed 5.2 acid, using a Bromcresol Green indicating fluid and slide comparator. From this reading it was reasonable to conclude that the fountain etch was strong enough to retard the bleeding action, but not strong enough to attack the halftone dots or the grain on the plate. Hence, that eliminated any argument about the fountain.

The second step was to inspect the grain on the plate. This was done using an electrically lighted 8-power glass. Everyone agreed after carefully inspecting the plate that the grain looked perfect in the bad areas as well as the good areas. Hence, that eliminated any argument about the grain.

The third step was to check the platemaker's albumin. A Phenol Red indicating fluid and slide comparator was used. The reading showed an alkaline strength of 7.2, which should reasonably guarantee an ink-receptive image under an exposure of 3½ minutes, and a humidity of 68% with the equipment being used at the time.

Should the reading have been 8.0 or above, it would have been likely that the image was too soft to resist the friction of rollers, dampers and blanket. This conclusion is reached by considering the above exposure time given by the platemaker. The higher the alkalinity, the greater the exposure time necessary to harden an image to the bottom of the grain. Had the reading been 7.0 or less on the acid side, it would have indicated that the image was over-

exposed during the same 3½ minutes. This would cause an overhardening of the coating, and reduce the receptivity of ink to the image.

Ammonium hydroxide is the factor governing the final alkalinity of the albumin coating. By measuring the alkaline strength of albumin with pH control equipment, one can easily judge the operating quality of the coating used and arrive at an accurate decision. Of all solutions used in lithography, the alkaline strength of the albumin coating is the most difficult to identify by eye, as is the usual practice.

The use of pH tests gave an accurate and scientific answer to the possible causes of trouble in the fountain and the platemaking department. That left, by the process of elimination, the trouble to some mechanical cause and precisely that was eventually found. The upper damper was bearing evenly, but the under damper was bowed in two places. Someone had forgotten to check the lower damper. It was only after all other sources were eliminated, that everyone thought it wise to check again and see how the dampers were bearing on the plate. Previously the bearers had been checked and the packing under the blanket and plate were "miked" but the under damper had been allowed to pass unnoticed.

Obviously, pH control did not show up the damper trouble, but in the experienced and capable hands of a lithographer, pH equipment can be most important in spotting production trouble. The total time involved in the case cited above was only twenty minutes, and that allowed for a careful test of each solution involved inasmuch as there were many opinions about the cause of the trouble.

Just as over-acidity has caused considerable loss to the lithographer, under-

(Turn to page 65)



Fuchs & Lang exhibit at the National Canners Association Convention in Chicago last month.

Canners Meet

PROBLEMS in canned foods production as a result of the national defense program were the major subjects discussed at the National Canners Association convention, held in Chicago last month. At the same time the important part lithography plays in merchandising canned food products was not overlooked.

Much of the confusion created by efforts to adjust the industry to the labeling requirements of the Federal Food, Drugs and Cosmetic Act has abated and the canners have turned their attention to ways and means of putting more effective sales appeal into their labels. Cooperating to this end, numerous lithographing concerns exhibited their latest ideas on label design and production throughout the Convention. To demonstrate how labels are now being designed in compliance with the law, a display of approximately 1,000 labels now used by leading canners was shown. Every class of food product produced by the industry

was represented. Supplementing this exhibit, the association distributed its new 96-page manual entitled "Labels for Canned Foods," which contains detailed instructions regarding label design under the Federal Act. This includes a discussion of the general purpose of the descriptive labeling program, a table showing the label requirements for each canned food product, a definition of terms recommended for use in the new labeling system, and numerous artist's layouts showing typical label designs.

Recognizing the growing consumer demand for full and accurate descriptive labeling on food packages, the Board of Directors of the Canners Association authorized a "consumer survey," to determine just what consumers want in this matter. Some independent commercial research agency will be immediately engaged, it was announced, to gather data and compile an unbiased report.

S. C. Shirley, of the research depart-

ment of American Can Company was a speaker at the convention. He discussed the advantages of lithographing the label design directly on the tin can.

"If the design is lithographed directly to the tin-plate," said Mr. Shirley, "a more enticing display is obtained. The lithographed tin label possesses permanence, particularly for products kept under refrigeration. For small, rectangular meat cans the lithographed package is more economical than other means of decorating the can, taking into consideration its shape."

He referred to the use of lithographed cans made for years by salmon and sardine packers, which, he said, proved the value of decorated covers as a means of labeling and improving container appearance. Recent developments in the chemistry of litho inks and coatings, he added, have contributed much to enhancing the sales appeal of lithographed containers.

Lithography was very well represented at the immense trade exhibition

staged by the Canning Machinery & Supplies Association. J. H. Eleveld, Sr., Michigan Lithographing Co., Grand Rapids, Mich., served as president of the association during the past year. The list of litho label firms represented included: Calvert Lithographing Co., Detroit; Gamse Lithographing Co., Baltimore; Michigan Lithographing Co., Grand Rapids; Progress Lithographing Co., Cincinnati; United States Printing & Lithographing Co., Cincinnati; Stecher-Traung Lithograph Corp., San Francisco; Schmidt Lithograph Co., San Francisco; Lehmann Printing & Lithographing Co., San Francisco; McGill Colortype Co., Minneapolis; National Color Printing Co., Baltimore; and Rossotti Lithographing Co., North Bergen.

Representatives of the metal lithographing field included American Can Co., Continental Can Co., Heekin Can Co., National Can Corp., Crown Can Co., Owens-Illinois Can Co., Anchor Cap & Closure Co., Crown Cork & Seal Co., and Casper Tin Plate Co.

United States Printing & Lithographing Company presented a display of lithographed labels demonstrating principles of functional design. J. S. Bond, Chicago divisional manager, pointed out that on old labels the common practice was to repeat on the back side of the can the same art work and copy which appeared on the front. But the modern label, he told the reporter, has three sections. In the principal panel appears the natural color vignette with the brand name which identifies and describes the can's contents. The second unit is the mandatory panel carrying information required by the federal food and drug law. The third section is the "consumer panel" which contains recipe suggestions and information for consumers, such as number of servings, facts about the processing, etc. J. P. Thomas, president, A. C. Saylor, divisional manager, Harry Langluttig, Baltimore manager, were also on hand from U. S. Printing & Litho.

Stecher-Traung Lithograph Corp., introduced a new label called "Visi-Top." It consists of a natural color photograph of the inside of a can after the cover has been removed. This is pasted to the top of the can and by visualizing its contents it conveys to the purchaser a realistic suggestion of what

is being bought. Hal W. Johnston, general sales manager, supervised the presentation, assisted by Walter A. Stuart, Leo Blank and Wiley M. Jordan, midwestern, west coast and southern sales managers, respectively. Charles S. Booth, Walter S. Maier, Gilbert L. Brooks and William B. Pigott, of the Chicago office, were also on hand.

Schmidt Lithograph Company was represented by Ben D. Dixon, sales manager, and Wm. J. Reade, from San Francisco, and Curtis Wright, Jr., of the Chicago office.

Gamse Lithographing Co. exhibited its line of "custom built" labels and its "assembly line" service for food packers. Herman Gamse, president, and William A. Gissel, eastern field manager, explained the company's group printing plan for reducing production costs on orders involving 25,000 or more labels.

Calvert Lithographing Co., which is this year observing its 80th anniversary, exhibited a booth representing a typical grocery store. F. W. Barnard, Detroit, sales manager, was in charge, assisted by Sidney Scott, Nelson Rudderow, H. B. Hunter and R. R. Flesher.

Progress Lithographing Co., which since the last convention merged with Nivison-Weiskopf Co., displayed natural color photographs showing its offset presses and other production equipment. Ben F. Klein, sales manager, was in charge, assisted by Randolph Trager, Howard Hill and Saul Mark.

Michigan Lithographing Co. displayed its "Colorcraft" food illustrations made from direct color photography. Leonard Howe and Earl Eckard, Indianapolis manager, Ralph Greenman, Toledo, E. George Kitson, Detroit, Robert Darby, John H. Eleveld, Jr., and John H. Eleveld, Sr., from the home office, were in attendance.

Other lithographing concerns maintained headquarters for their salesmen during the convention. They included: Lehmann Printing & Lithographing Co., San Francisco, represented by Al Weinstein; McGill Colortype Co., Minneapolis, J. H. Brimeyer and J. W. Hautman; National Color Printing Co., Baltimore, Harry Wehr, president, R. B. Magruder, vice-president, and J. Herbert Stansbury; Rossotti Lithographing Co., North Bergen, N. J., Chas. C. Rossotti and Ralph A. Nickel.

Outserts, Inc., New York City, again

exhibited its line of package advertising folders for attachment to the outside of food cans. Users employ the Outserts to present recipes, advertise other products or offer premiums. They are lithographed by Eureka Specialty Printing Co., Scranton, Pa., and Schmidt Lithograph Co., San Francisco.

Fuchs & Lang Manufacturing Co., maintained headquarters at the Bismarck Hotel during the week. Wm. H. Engelmann, Jr., Chicago manager, and Wm. O'Hara, New York, were in attendance. The merits of "Hard-Tex" ink and other metal decorating supplies were demonstrated.

A feature of the convention week's social program was a dinner given for lithographers by Charles R. Cosby, secretary of the Label Manufacturers National Association, New York. Robert C. Paulus, of Paulus Bros. Packing Co., Salem, Oregon, was elected president of the National Canners Association for 1941, to succeed H. F. Krimendahl, Celina, O.

Montgomery Ward & Co., Chicago mail order house, expanded their use of four-color lithographed work in the new 1,060-page general catalog for 1941, which was issued last month. Edwards & Deutsch Lithographing Co., Chicago, lithographed the cover and a two-page insert showing wall paper designs, while Goes Lithographing Co. and the Regensteiner Corp., also of Chicago, each lithographed four-color fashion inserts. There are 178 pages of color work in the new catalog, about 90 of which are in two-color rotogravure, ten in four-color offset and the rest in letterpress. Wider use of lithography would be made, according to C. I. Ingve, superintendent of mechanical production in Ward's catalog department, if lithographers could produce four-color work on a quantity basis for editions of several million copies and maintain the high daily production schedules the company requires. Lack of high speed offset presses, he said, is the handicap. Lithography was first used in the production of the Ward catalogs two years ago for the cover and various wall-paper inserts. The reason for the adoption of offset was that a finer screen could be used than the 120-line screen to which the letterpress process was limited on high speed presses.

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Offset press operation

Another in the series on pressroom problems by Mr. Latham, well-known writer, lecturer, authority and trouble-shooter.

BY C. W. LATHAM

IN order to define an offset press we must first know what is meant by "press" in the printing and lithographic trades. From Gutenberg's time until the present day, a press has been any piece of mechanism that will press a piece of paper into contact with an inked-up form or plate so that the paper receives an impression from that form, or becomes printed upon. Practically anything with two flat surfaces and a means of forcing them together under pressure may be called a press. Also a flat surface with a roller or cylinder that will roll over it is a press and, finally, two rollers or cylinders rolling together under pressure, one carrying an inked-up plate and the other a piece of paper is a press, of the direct type.

The essential difference between an offset press and all other types of presses lies in the fact that it contains an extra cylinder, rubber covered, upon which the image is printed first and then reprinted, or "offset," from this cylinder onto paper. Because of this third element, offset presses are limited to three major forms, the most popular and modern of which is the three cylinder type wherein one cylinder carries the form or plate and is termed the plate cylinder. Another cylinder is covered with a removable rubber blanket, which receives the impression from the plate and is called the offset or blanket cylinder. The third cylinder carries the paper which it presses against the

blanket and receives the final impression, this is called the impression cylinder.

The second type of offset and the form in which the offset was first developed, is the so-called flat bed stop-cylinder type. This press has a flat, reciprocating form, printing to the blanket cylinder, and thence to the paper carried upon the impression cylinder, so that instead of three cylinders, there are two cylinders and a platen or flat bed carrying the form or plate.

The third type of offset, and the one most popular for proving presses, has but one cylinder, which is the blanket cylinder. The impression is picked up

The author relates that at a recent lecture on offset press operation which he delivered in New England, several of his audience came to him afterward and said that while they understood some of his talk, most of it was Greek because they had never seen an offset press. They didn't know a bearer from a gripper, they said. Latham was amazed. How many other classes, he wondered, had been similarly uninformed. How many times had he been talking over the heads of his listeners? Hereafter, he concluded, he would take nothing for granted. Included in each lecture would be a simple explanation similar to the accompanying article of just what an offset press is.

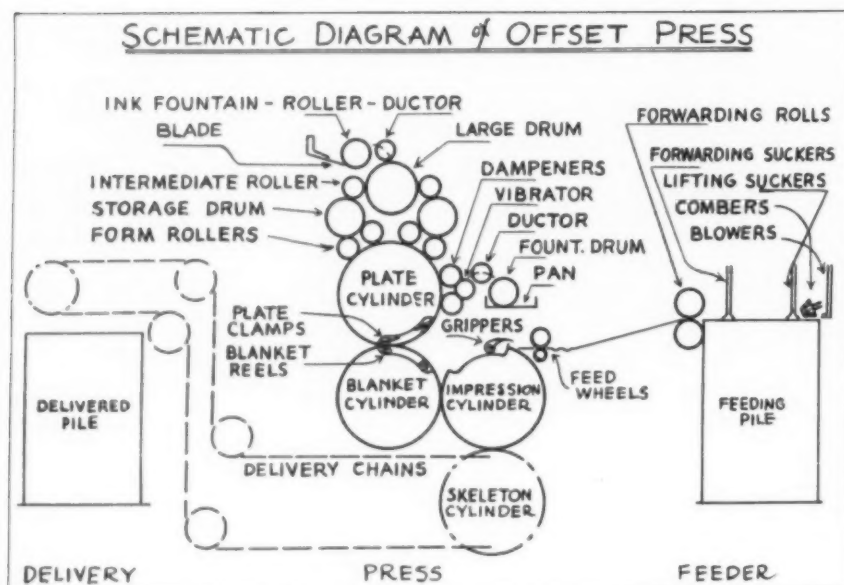
from a flat form by a blanket cylinder, carried over to another flat platen supporting the paper, where it offsets the impression onto the stock. In this form of press, either the two beds move in a reciprocating motion under a stationary blanket cylinder, or the cylinder moves back and forth over the two beds, picking up the image from the form and offsetting it onto the paper.

Before going into a more detailed description of the modern high speed rotary offset press, it might be well at this time to answer a question that must have occurred to many of our readers. The question is, if we can print directly from a plate to the paper, why do we go to the trouble and expense of complicating these presses with a third unit. The answer is not speed. A direct press can be built to equal any offset press either in speed or size. The answer is not accuracy, because the direct press has even fewer register and fit problems. The answer lies in how the image is to be transferred.

In lifting an image impression from a plate by means of a soft rubber blanket contact, this contact can be made so delicately and under such low contact pressure, that the surface of the plate is disturbed to a minimum degree and this kiss contact between wet plate and rubber blanket does not rob the grain of the plate of its moisture, as in the case of direct printing. Therefore, because of this kiss contact and absence of moisture loss, a much finer grain may be used and because of the finer grain, finer screens, better tone values, and wider range of the halftone scale may be reproduced.

As a comparison, finer direct printing grains may be obtained with aluminum oxide numbers 60 or 80 while offset grains are being run as fine as that obtained with aluminum oxide number 320. Squeeze pressures of twenty or more thousandths are used in direct lithography as against four in offset. Direct lithography is commercially limited to screens of from 80 to 100 lines to the inch, while offset successfully prints 250 lines to the inch, and the life of photo offset plates range from 200,000 to 600,000 under ideal conditions. These are reasons enough for offset.

The modern high speed rotary offset press ranges in size from a letter head in



one color, to sheets approximately four feet by six feet in four colors. Speeds of 5000 impressions per hour in the large sizes and 7000 or more in the small sizes are obtained. Web offset presses, printing one to four colors on a roll of paper and cutting into sheets at delivery, operate at speeds that are hard to believe.

Cylinders

The popular type of one color offset press is comprised of three cylinders, the plate cylinder, the blanket cylinder and the impression cylinder. These cylinders do not have a continuous surface, but are cut away in a portion of their circumference, forming a gap that comprises something like 20% of the total surface to accommodate plate clamping devices on the plate cylinder, blanket stretching devices on the blanket cylinder and paper gripping fingers or grippers on the impression cylinder.

Each cylinder has a spindle at the ends for bearings, and on one end of each cylinder is a driving gear, all three meshing together. Bolted to the body ends of the plate and blanket cylinders are steel rings that form traction wheels between the cylinders, insuring alignment, and smoothing out the intermittent power thrusts of the gear teeth. These steel rings are called bearers.

Inking Rollers

Directly over the plate cylinder and in light contact with the plate are four soft rollers called form rollers that ink up the plate. The forms receive their

ink and most of their driving action from two metal drums directly above them. These drums receive their power through end gears and have a reciprocating as well as a rotary motion and are sometimes called riders or storage drums. Each drum contacts two forms, and each receives its ink from a common, larger, metal reciprocating drum through the medium of soft intermediate rollers.

This large drum receives its ink from the intermittent contact of a ductor roller, also soft, which carries ink to it from the iron fountain roller which is charged with an adjustable amount of ink from a fountain or reservoir.

The foregoing comprises the inking device in its simplest form. Many variations of this form will be found, such as extra vibrators, extra transfer or storage rollers, extra upper riders and distributors, etc. The total area of the inking mechanism will sometimes exceed five times that of the plate, and as much as one-half of this will be vibratory to increase the "working" of the ink and smoother distribution.

Dampening Device

Before the inking rollers can be allowed to "roll-up" a plate, the plate must be dampened, and to accomplish this dampening, two molleton covered rollers are used, called dampeners. They receive their dampening solution and their rotation from a gear-driven, reciprocating metal roller, which in turn receives its solution from a molleton covered ductor which contacts inter-

mittently both the vibrator and a cloth-covered metal roller which runs in a bath of the dampening solution. The adjustment of the amount of solution supplied to the plate by the dampening unit is accomplished by the timing of the ductor contacts, and by squeegee stops placed upon the cloth covered roller.

Paper Mechanisms

Below the plate cylinder and in light contact with it, is the blanket cylinder. Beside the blanket cylinder is the impression cylinder which receives the paper from a paper inserting device that is generally considered to be part of the paper feeding unit called feeder. There are several types of inserting devices, the oldest and simplest of which is a means of extending the gripper edge of the sheet to a point that is in just the right position for the tumbler type grippers to grasp it as they go by. Tumbler grippers are a type that open wide by the action of a double end trip cam and pin unit on one end of the gripper shaft. They open to a position of approximately a half turn of the shaft so that the fingers in the open position will not protrude above the surface of the cylinder body. With this type of gripper, the paper may be held at rest until the tips of the fingers have passed the edge of the sheet, then by a quick tumble of the grippers, the paper is caught and carried into the press.

The other type of mechanism used to get the sheet to the impression cylinder grippers consists of a flying gripper bar that takes the sheet and whips it up to cylinder speed and releases it just as the partly open cylinder grippers grasp it. These cylinder grippers are not of the tumbler type.

The third most common arrangement consists of friction wheels, spaced along two shafts, one above and one below the gripper edge of the paper. When the paper has been registered to approximate front guides, and then a side guide, these wheels, which are really cams, grasp the sheet and carry it forward at a speed slightly greater than that of a cylinder, again registering it under motion to front guides on the cylinder itself, just before the cylinder grippers close upon it.

Feeding devices for all types of cut sheet presses are pretty much alike in

that they separate the sheets by a combing action, the top sheet is raised by air suction cups, the sheet is then "floated" by a small blast of air and then other suction cups move the sheet forward to a position where it can be grasped by forwarding wheels which roll it toward the inserting device.

The essential difference between this feeder and the more recent stream feeders, is that the sheets in the stream feeder overlap, allowing four or five sheets to be in motion at one time and therefore move more slowly. This gives more time for the registering devices to act and it keeps the sheets in a flatter condition with less likelihood of curling and jamming.

Delivery

Delivery of the sheet is accomplished in modern presses by what is termed the chain pile delivery. Endless chains, operating on each side of the press inside the frames and travelling at cylinder speed, carry gripper bars that are spaced so that each sheet, as it comes off the impression cylinder is grasped by a gripper bar that has been carried into transfer position by a so-called skeleton cylinder. After the transfer of the sheet has been made from the impression cylinder to a delivery bar, this bar carries it forward, then up and out over a pile where it is dropped and "jogged" into alignment with the rest of the sheets.

The foregoing units with their proper supports and bearings, means of adjustment and timing, together with trips to separate cylinders, clutches and stops for feeder, pumps for air and vacuum and many other means of regulation constitute the modern single color offset press. It has won a place for itself in the graphic arts industry and will remain with us for a long time to come.

Issue A & S Talent

Volume 1, No. 1, of *A & S Talent*, an eight-page tabloid offset newspaper, was issued last month by the Advertising and Selling Group of the Advertising Club of New York. All of the writing, editing, layout and art work was done by students of the Advertising and Selling Course. Typewritten copy is used for the newspaper which is produced by the General Offset Co., New York.

FEBRUARY 1941

Offset platemaking

This is the second in a series on Platemaking by Mr. Nicholson, production manager of Ronalds Offset Lithographers, Ltd., Montreal, Canada, and author of the new book, "Photo-Offset Lithography." Mr. Nicholson will be glad to answer any questions you may have regarding Platemaking. Address your inquiries to MODERN LITHOGRAPHY.

BY DON NICHOLSON

ALBUMEN coatings were used on lithographic plates and stones before the advent of photo-lithography. The old submarine process which was used on stone was an albumen coating process. There is nothing new in making albumen coatings, therefore, and furthermore there is little in the following article that has not been covered by the Lithographic Technical Foundation. However, it is a method that is simplified and foolproof.

The ammonium dichromate solution is made beforehand. A stock 20% solution is conveniently kept ready in a dark bottle away from the light. A gallon is enough to make at a time for the average small shop. Make it in a wide mouthed jar, it is easier to get the dichromate in; and in warm water, so that it will dissolve easily. It doesn't matter which are used, crystals or granulated ammonium dichromate, but crystals are usually cheaper and as the stock solution is made up beforehand it will have plenty of time to dissolve.

The albumen solution should also be made beforehand. It will be found convenient to put it to soak the night before so that it will be ready for plate-making in the morning. Use only the pure scale albumen. This comes in flakes like breakfast food and is straw colored and transparent. It doesn't have much

of an odor. There are several prepared albumens on the market that have preservative in them. They are fine, but they also necessitate changing of formulae and there are enough complications without manipulating formulae. There is also duck egg albumen which must be avoided. It has a strong smell and an orange color. It is much better to make up an albumen solution fresh each day or every two days. It may be kept in an ice chest.

The albumen should be suspended in water in an 8-ply bag made of cheesecloth. Buy the cheesecloth by the bolt and make up several square bags about 6 by 6 inches and stitched with thread along the sides.

Weigh 4½ ounces of white scale albumen. Use an apothecary's balance, not a grocer's scale. Fill a beaker with 23½ ounces of cold filtered water, distilled is preferable, and suspend the albumen in it by tying the albumen in the bag and hanging it in the beaker from a small rod so that the bag doesn't touch the sides of the beaker. Four hours is usually sufficient time for the albumen to dissolve. Squeeze it gently when removing it from the solution, do not wring it. The bag may be turned inside out and washed in running water and then kept in a jar of clean water until it is used again.

A Baumé reading is taken with a Baumé Hydrometer reading 0 to 10 degrees. As many ounces of this albumen solution are used as are indicated by the Baumé reading.

Baumé reading	Ounces of solution
5.1	23 $\frac{3}{8}$
5.2	22 $\frac{3}{4}$
5.3	22 $\frac{3}{8}$
5.4	21 $\frac{7}{8}$
5.5	21 $\frac{1}{2}$
5.6	21 $\frac{1}{8}$
5.7	20 $\frac{5}{8}$
5.8	20 $\frac{1}{4}$
5.9	19 $\frac{7}{8}$
6.0	19 $\frac{5}{8}$
6.1	19 $\frac{1}{4}$
6.2	18 $\frac{7}{8}$
6.3	18 $\frac{5}{8}$
6.4	18 $\frac{1}{4}$
6.5	18
6.6	17 $\frac{3}{4}$
6.7	17 $\frac{1}{2}$
6.8	17 $\frac{1}{4}$
6.9	16 $\frac{7}{8}$
7.0	16 $\frac{5}{8}$
7.1	16 $\frac{3}{8}$
7.2	16 $\frac{1}{8}$
7.3	15 $\frac{7}{8}$
7.4	15 $\frac{3}{4}$
7.5	15 $\frac{1}{2}$

Four ounces of the 20% Ammonium Dichromate stock solution are then added to the amount of albumen solution indicated by the table, and water is added to bring the solution to 40 ounces. It is then filtered through a paper filter. This amount may be varied to from 32 ounces to 48 ounces. When the plate has been coated, inked and developed it should be possible to see the contours of the grain under the inked image with a glass. If the points of the grain come through, the coating is too thin and less water must be added. If the contours of the grain cannot be seen, the coating is too thick and more water should be added. If the coating is too thin the image will print gray, if it is too thick it will lift from the plate surface while on the press and the halftone dots will not print sharp.

The next article will discuss the preparing of the plate, the coating exposure and development of it.

Installs Photo-Composer

Nu-Era Photo-Engraving Co., Chicago, has just purchased from Rutherford Machinery Co., Chicago, a photo-composing machine for use in making plates for both letterpress and offset work.

Offset paper at work

Another in the series on offset paper by Mr. Wheelwright, editor of "Paper & Printing Digest" and author of "From Paper Mill to Pressroom." He is a member of the Technical Association, Pulp and Paper Industry, and also of the American Institute of Graphic Arts.

BY WILLIAM BOND WHEELWRIGHT

SPEEDY production being the main reason for web press printing, the papermaker must carefully observe certain specifications. Rolls have to be wound hard and trimmed accurately and cleanly. There must be no soft spots in a roll. The number of breaks should be kept at a minimum. Where breaks occur the web must be neatly spliced and plainly flagged.

In packing rolls for shipment especial care has to be taken to protect the ends. A slight crack is sure to cause breaks on a press. The handling and shipping of rolls is generally well looked after at the mill, but not always so well cared for by truckmen and handlers at the delivery point.

A roll leaving the mill in good condition may suffer from abuse in transit or from neglect in storage. If stored in damp places, rolls may absorb moisture through the ends, developing hard ridges due to swollen fibers. If rolls happen to be placed too close to steam pipes or radiators, the opposite effect may occur. Moisture is abstracted causing softening about the end of the roll.

Mechanically imperfect rolls are likely to delay production. Therefore each roll should be examined before putting it on the press. Soft spots can be easily detected by tapping the roll across its full width with a wooden billy. A well

made roll gives a ringing sound, while a lack of resonance is proof of a soft spot.

A soft spot means that the paper in that particular area of the web has been thinned more than adjacent sections. This thin area may either be caused by excessive pressing on the wet end of the paper machine, or at the calenders. Occasionally calender rolls become unequally heated, causing unequal expansion at such places. Both the thickness and the finish of the paper will be adversely affected at such points. In extreme cases these conditions may be foretold by the discovery of soft spots. Other troubles such as blackening or calender cuts of course, can only be detected after the roll begins to run.

It is important also to examine the edges of the roll for cracks, and if any appear to cut off as many layers of the paper as may be necessary until such defects no longer are evident, before trying to use it.

If after starting a roll a calender cut is observed, the press should be stopped and enough layers of paper cut off to make sure this defect has been eliminated. Calender cuts occur from improper regulation of the tension of a web of paper over a paper machine. Usually they are promptly detected by vigilant backtenders, and cut out of the roll on the winder of the paper machine.

After careful research conducted

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jointly by the research associates of the American Newspaper Association and the Technical Director and the Associate Chemist of the Government Printing Office, it was found that "in most instances paper breaks on the press are due to local defects, uneven winding or to some trouble other than lack of strength in the paper as a whole." If this is true as applied to newsprint, it is far more likely to be the case with magazine or book papers which are characteristically stronger and heavier. The basis weight for ordinary newsprint is 24x36—32 lbs. The tests of 233 samples disclosed that the bursting strength varied from 7.5 to 13.5 points. The tensile strength varied from 7.76 pounds per inch width to 15.24 pounds in the machine direction, the stretch expressed in per cent varied from 0.3 to 2.8. Breaks are therefore not caused by deficiency of tensile strength but may be due to faulty slitting which sometimes cracks the edges of the paper.

Occasionally paper which is otherwise quite satisfactory is "baggy." This bagginess results from soft spots, usually near or at either end of a roll. Sometimes this difficulty may be overcome simply by turning the roll end for end. If this won't work it may be necessary to discard the offending roll.

Changes in atmospheric conditions around a web press are not so vital as in sheet printing. The paper is not exposed sufficiently to expand and cause misregister. Without controlled humidification, however, static troubles become more annoying, and the viscosity of the ink, which naturally affects its transfer, is also out of positive control. The packing of the cylinders are also subject to variations induced by atmospheric changes. It is therefore better all around if pressrooms are equipped with some form of air-conditioning.

Hear Al Rossotti

Alfred F. Rossotti, president of Rossotti Lithographing Co., North Bergen, N. J., was guest speaker at a meeting of the Litho Club of Philadelphia last month at the Poor Richard Club, Philadelphia. Mr. Rossotti discussed the variables present in the art, photo, plate and press departments of the lithographic plant and outlined some of the methods being used to overcome existing problems.

FEBRUARY 1941

Technical news and Literature

This is a regular department conducted by Mr. Martin, of the Harold M Pitman Company, in which technical books, articles, papers and similar literature of interest to the lithographic industry are reviewed and discussed. It is intended as a supplement to the Lithographic Abstracts prepared by the Research Department of the Lithographic Technical Foundation, Inc.

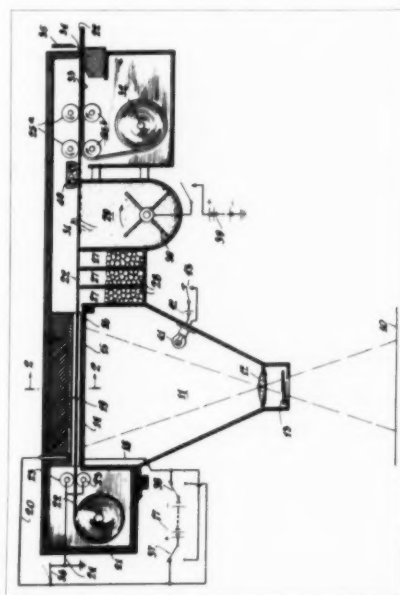
BY KENNETH W. MARTIN

Electron Photography. U. S. Patent No. 2,221,776, November 19, 1940 issued to Chester F. Carlson, Jackson Heights, N. Y.

MR. CARLSON'S patent relates to a new method of photography and a suitable apparatus for producing electron photographs. A lens system of the usual type is used to focus the image to be photographed on a transparent surface which is described as being photo-emissive. That is, the surface will give off electrons in proportion to the amount of light which it receives. These electrons can then be used to set up an electric charge on another surface. The charged areas of this surface will strongly attract particles of powdered material, and therefore wherever the surface has become charged an image may be made to appear by applying a powder. In order to make the image permanent, it may be laminated with a sheet of transparent material or if the powder used for dusting is white, a positive image may be obtained by using a black backing.

The patent describes an apparatus which automatically feeds the transparent material, which may be any non-conductor such as cellophane or

celluloid, between the photo-emissive surface and a charged metal plate. This plate, having a voltage of 1000 volts or more impressed upon it, strongly attracts the electrons given off by the effect of the light image on the photo-emissive plate. When a satisfactory electrical charge has been built up, the shutter of the lens is closed and the transparent base is moved to a chamber where the powder particles are agitated by a fan. These particles cling to the charged portions of the sheet producing





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an image in negative. This image must now be fixed because if the sheet were exposed to a damp atmosphere it would become discharged and the powder would fall off.

The inventor describes a number of methods of fixing the image. The original sheet may be laminated with paper or a second transparent sheet, or the original transparent base may be coated with wax or resin before the image is formed on it. After the dusting operation, the base may be heated, softening the wax or resin and causing the powder to adhere on account of the tackiness. Upon cooling, the surface would harden again. Another method of fixing the image consists of using powder for dusting which may itself be softened by heat. The inventor also states that droplets of liquid ink or stain may be used in place of powder to form the image.

Comment

The drawing accompanying the patent shows a fixed focus camera presumably arranged for copying work at same size. The base used is stored in a roll at one side of the camera and is drawn through, exposed, developed, fixed and chopped off as it comes out of the opposite side of the camera. Since the processing is all done dry, there should be very little delay between exposing and delivery of the finished negative. No expensive silver salts are used so the operating costs should be very low. No data is given as to what exposure time must be used to produce an image and the use of a half-tone screen apparently is not contemplated. Since there is a definite distance between the actual light image and the negative surface, there would seem to be a possibility of a lack of sharpness in the negative despite the fact that the inventor claims that the presence of the charged metal plate behind the negative surface causes the electrons to pass in practically straight lines.

Redsol Crystals, A Substitute for Potassium Ferricyanide Photo Technique, Volume 2, No. 12, December, 1940.

POTASSIUM ferricyanide is very largely imported. The chief manufacturing countries for this chemical are

either engaged in hostilities or are in no position to export any quantities of chemicals. Consequently there has been a possibility of a shortage developing. Potassium ferricyanide is largely used in the camera room for "cutting" negatives and is also used in most dot etching formulas. There is now available a substitute of American manufacture which is said to be cheaper and more effective than the imported product. This new material called "Redsol" is produced in the form of very fine crystals which dissolve readily. A high percentage of the potassium content has been replaced by sodium and the new compound is claimed to contain 103.5% of the ferricyanide content of potassium ferricyanide. For all practical purposes, however, the "Redsol" can be used in place of potassium ferricyanide without any formula changes.

Offset Classes on Double-Shift

Last month the offset department of the Technical Trade School at Pressmen's Home, Tenn., was put on two-shift per day basis. This was done, according to the announcement, to meet the ever-increasing demands for instruction in offset printing. Thomas E. Dunwoody, director, states that applications for admittance to the school have come in at such a rate recently that the move to a two-shift schedule was imperative. As it is, he declares, there is a long waiting list. It is the first time in the school's thirty years of operation that a double shift for instruction has been necessary.

L. T. F. Intensive Course

Arrangements have been made by the Lithographic Technical Foundation, New York, in cooperation with the New York Trade School, to offer for the fourth time the Intensive Course in the Fundamentals of Lithography for graduate chemists and engineers. The aim of the course is to acquaint young technical men with the fundamentals of the lithographic process. Class sessions for the Intensive Course are held for a period of nine weeks during the Summer. Enrollment is limited to twelve.

Instruction in the following subjects will be given: photography; stripping; color correcting; plate-making; and offset press operation. Numerous inspection trips to lithographing plants as

well as to supply and equipment manufacturing plants round out the schedule.

Each student in the course is sponsored by a lithographing company or by a company in a related industry. Companies who desire to avail themselves of this opportunity may not have men in their employ who are eligible. If such companies want to select college men and put them through the course as a preliminary to employment, the Foundation has compiled a list of qualified candidates who are available.

Discuss Future Litho Markets

A meeting of the Young Lithographers Association of New York held last month at the New York Advertising Club featured a discussion of future lithographic markets by representatives of three press manufacturers. H. W. Blomquist, of Harris-Seybold-Potter Co., reviewed the various sizes of presses manufactured and explained the type of work for which each was suited. He stressed the importance of the small press in lithography and suggested multi-color work in juvenile text books as a potential market. George N. Auerbacher, vice-president of Champlain Press Corp., pointed out new horizons in the gravure field and compared the relative merits of gravure and offset. He cited as advantages of gravure simplicity of operation, greater production, superiority of over-all quality and press flexibility. The last speaker, William B. Marsh, consultant to American Type Founders, Inc., discussed developments in the sheet-fed offset press field and what they mean in the way of new markets. He traced the history of this type of press and covered technical phases as well as the performance of web offset presses. Mr. Marsh called attention to the type of business which this machine can handle showing samples of work produced on a web press.

Cuneo Press Issues New Stock

Stockholders of Cuneo Press, Inc., printers and lithographers of Chicago and Philadelphia, approved the issuance of 21,000 shares of 4½% cumulative preferred stock at a special meeting last month. The new stock will probably be offered to holders of the present 6½% cumulative preferred stock with the company paying a \$7.50 per share bonus on each share exchanged.

IN AND ABOUT THE TRADE

Mabel E. Griffith Dies

Mabel E. Griffith, Assistant Secretary of the United States Printing and Lithographing Co., Cincinnati, died recently. Mrs. Griffith had been with the company for over thirty years. She was a past president of the Women's Rotary Club and a member of the Advisory Board.

Join Laurel Process

Charles Nauheim, Alfred Nauheim, Joseph G. Zimm, R. W. Card and Leon W. Harris, formerly of Photo Litho Service, Inc., are now associated with the sales department of Laurel Process Company, New York, photo-offset lithographers and letterpress printers.

Honor H. A. Porter

Harry Porter's 25th anniversary as sales manager for Harris-Seybold-Potter Co., Cleveland, was celebrated at a dinner held in Cleveland on February 1st. The banquet was held in connection with a three-day convention of the company's sales staff. Harris-Seybold-Potter's sales representatives from all parts of the country attended.

Amalgamated Advertises

The Amalgamated Lithographers of America has launched a national advertising campaign for the purpose of acquainting the general public with the nature of the lithographic process. Business publications are being used at present. Consumer media will be added in a few months. While various other unions at one time or another have used advertising to cover specific problems or incidents, this campaign of the lithographers' union is believed to be the first extensive continued union promotion effort to acquaint the public with a manufacturing process.

An American Federation of Labor affiliate, the Amalgamated Lithographers of America, was founded in 1882, has fifty-four local unions and a membership of over 13,000 in every branch of lithography. William J. Riehl is

international president with offices at 450 Seventh Avenue, New York.

Emil Mogul Co., New York, handles the account. Alfred Paul Berger is the account executive.



ALFRED F. ROSSOTTI

... heads New York Litho Club
New officers of the New York Litho Club, elected last month are: Alfred F. Rossotti, Rossotti Lithographing Co., president; William Carey, Sweeney Lithograph Co., vice-president; Walton Sullivan, Tooker Lithograph Co., secretary; and Harold Mobus, Kindred, MacLean & Co., treasurer. Board of governors: Theodore Bielitz, American Colortype Co.; Edward J. Dullmeyer, McGuire Brothers; Oscar Falconi, Maverick & Wissinger Co.; Carl Heim, Kindred, MacLean & Co.; Irving Kempner, Einson-Freeman Co.; Edward Reed, Jr., Rossotti Lithographing Co.; Peter A. Rice, Salzer & Co.; John Schaefer, Oberly & Newell; George Schlegel, 3rd, Schlegel Lithographing Co.; and George Walsh, Offset Engravers Associates, Inc.

Howard Flint Marks 21st Year

Howard Flint Ink Co., Detroit, celebrated its 21st anniversary with a dinner at the Hotel Statler last month. More than 160 employees attended, including sales representatives from various parts of the country who had taken part in a three-day meeting of the sales staff. The occasion also marked the dedication of a

new building recently added to the company's Detroit factory group. The building, which is a two-story brick and concrete structure providing an additional 16,000 square feet of space, will house a new laboratory and experimental printing department.

Lasher Appoints Wilkens

George F. Lasher Printing Co., Philadelphia printing and lithographing concern, has just announced the appointment of John A. Wilkens as sales manager. Mr. Wilkens was formerly vice-president and treasurer of Charles Francis Press, New York, with which firm he had been associated for thirty-four years. He has also been treasurer of the New York Employing Printers Association and treasurer of the Advertising Club of New York.

Plan Nation-wide Campaign

Gartner & Bender, Inc., Chicago offset concern, have just announced plans for a year-round national advertising campaign to promote their line of greeting cards. Space will be used in twelve publications including *The Saturday Evening Post*, *Colliers*, *Life*, *Liberty*, *Ladies' Home Journal*, *Woman's Home Companion*, *Good Housekeeping*, *Vogue*, *Esquire*, *Mademoiselle*, *Harpers Bazaar*, and *House and Garden*. In addition, several trade journals will also be used. The advertisements, which are being prepared by the Salem N. Baskin Agency, will direct attention to greeting cards distributed chiefly through variety and department stores. The national campaign was decided upon according to J. M. Engle, sales manager, after successful tests conducted during the last three months of 1940 in certain class publications.

L. N. A. to Meet May 27-30

The Lithographers National Association announces that its 36th annual convention will be held May 27-30, at The Greenbrier, White Sulphur Springs, W. Va. Details of the convention program will be released shortly.

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I. Thorner Joins Medo

I. Thorner, for the past six years consultant and trouble-shooter for the graphic arts department of Agfa Ansco, Binghamton, N. Y., has joined Medo Photo Supply Co., of 15 West 47th St., New York, it was announced last month. Mr. Thorner, who is widely known in graphic arts circles as a lecturer, trouble-shooter and technical authority on all types of reproduction work, will take charge of Medo Supply's graphic arts division. The intention, according to an announcement released early this month, is to expand the company's graphic arts



I. THORNER

department. A complete line of photographic supplies for the trade will be carried. In spite of his increased responsibilities, Mr. Thorner states he will continue to be available to all his friends as a speaker and consultant on lithographic problems.

Brinkman Heads Chicago Lithos

Albert Brinkman, superintendent of the pressroom at Magill-Weinsheimer Co., Chicago, was elected president of the Chicago Lithographers Club, at the annual meeting last month. Mr. Brinkman, who served as vice-president the past year, succeeds Frank Hohegger, of Curt Teich & Co. To fill the vice-presidential vacancy the club selected Walter Leggett, superintendent of pressroom at U. S. Printing & Litho's Chicago plant. Harold Harpling, of Curt Teich & Co., was re-elected secretary, and Martin Wezeman, of Columbia Lithographing Co., was retained as treasurer.

In recognition of Mr. Hohegger's five years as president of the club, the members presented him with a recording

radio. While extending his thanks to the club members for their cooperation during his term of office, unknown to him, a record of Mr. Hohegger's remarks was made and then played back on the concealed instrument just before it was presented. Mr. Hohegger had been president of the Chicago club for three successive terms, then, after an interval of a year was re-elected for the past two years. Through his energetic and aggressive piloting of the organization the Chicago Litho Club has become an influential factor in graphic arts circles in Chicago. Due to the press of urgent personal affairs he felt it best to retire and it was with reluctance that the Club acceded to his desire. He had returned to Chicago only a week prior to the election after three months in California.

Permanent Litho Exhibit Opens

The first permanent exhibition devoted to the display of commercial, art and advertising products of the lithographic process was opened to the public on February 1st at the New York Trade School, 312 E. 67th Street. Exhibits for this permanent "Living Lithography" Exhibition, which is being sponsored by the New York Trade School in collaboration with the Lithographic Technical Foundation and the Lithographers National Association, New York, were gathered from lithographers all over the country, and include some of the items which appeared in the "Living Lithography" Exhibition held in Philadelphia last October.

More than 3800 square feet comprise the exhibit, including two full-sized billboard posters, five dummy store windows with typical point-of-sale installations, 32 linear feet of table space for the display of books of all types, an exhibition of decorative and commercial lithography on 3-dimensional tin products, and more than 75 individual exhibits ranging from bank checks, broadsides and can labels to fine art lithographs, calendars and greeting cards.

Although some of the exhibits will remain on view for 30 or 90 days, there will be a steady turnover of material with new exhibits coming in weekly in order to keep the exhibition progressively up-to-date. All lithographers are invited to participate and may obtain full information regarding exhibit space

from the Educational Department of the L. N. A., 295 Madison Avenue, New York. The permanent "Living Lithography" Exhibition is open to the public, free of charge, from 9 to 12 and 1 to 4 on weekdays and from 9 to 12 on Saturdays.

Harvey Conover, 75, director of planning for General Outdoor Advertising Co. prior to his retirement six years ago, died in Chicago last month.



WALTER RICHARDS

... new sales promotion manager, Snyder & Black, Inc., New York. Mr. Richards was formerly assistant advertising manager in charge of Display and Merchandising with Pabst Brewing Co.

Honor Wasserscheid

August A. Wasserscheid, manager of the Eastern branch of the Mallinckrodt Chemical Works at New York, was tendered a testimonial dinner at the Waldorf-Astoria Hotel, New York, last month by 150 friends in the trade. The occasion marked the 70th birthday of Mr. Wasserscheid as well as his completion of 48 years with Mallinckrodt. Chairman of the dinner committee was B. M. Spencer, B. M. Spencer & Co. Joseph A. Husiking, Fritzsche Brothers, Inc., acted as toastmaster. Among the speakers were Dr. A. C. Boylston, general manager and vice-president of Mallinckrodt; W. D. Barry, assistant New York manager; Florin Hailer, United Drug Co.; George Simon, Heyden Chemical Works; James Kerrigan, Merck & Co.; and F. J. McDonough, New York Quinine & Chemical Works. A handsome grandfather's clock was presented to Mr. Wasserscheid.

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A BUY-WORD FOR HIGH-GRADE PAPERS

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PHOTO OFFSET LITHOGRAPHY

by Donald Nicholson

Production Manager of Ronalds Offset
Lithographers, Ltd., Montreal, Canada,
and contributor to Modern Lithography.

A simply written book covering all the essentials of Photo Lithography, as well as the necessary technical information. It fills a long felt need and should be of great value to craftsmen, production managers, sales executives, and plant owners as well as teachers and students in the field of lithography.

Partial List of Contents

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LAYOUT—Ganged Jobs; Color Separation; Mechanical Tints; Color Process.

PLATE MAKING—Ganged Exposures and Double Exposures; Plate Etches, Gum Arabic, Albumen and Preservatives; Photo-Composing; Paper Prints, Vandyke, etc.; Transparentizers; Glass Keys; Deep-Etched Plates; Imprints.

PRESS WORK—Feeding Different Stocks; Pile Regulator; Impression Bars and Push Rules; Harris Feeders; Cut-Out; Timing; Dexter Feeder; Suction and Air; Feeder Trouble Helps; Blanket Wash; Fountain Solutions; Attaching Plate; Lithographic Inks; Reducers; Driers; Binders; Make Ready; Press Troubles; Scumming; Streaks; Paper.

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MODERN LITHOGRAPHY

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New York City

MODERN LITHOGRAPHY



Regional conference of photo-lithographers of the Middle West sponsored by the National Association of Photo-Lithographers, at Wichita, Kansas, January 24 and 25. Inset, Walter E. Soderstrom, executive secretary, A. G. McCormick, Jr., McCormick-Armstrong Co., Wichita, vice-president, and Merle Schaff, Dando-Schaff Printing and Publishing Co., Philadelphia, president of the NAPL confer with Herb Carr, Mutual Press, Hutchinson, Kansas, who presided at the round-table discussions.

NAPL Holds Regional Conference

At the invitation of the National Association of Photo-Lithographers, a group of owners and managing directors of photo-lithographing plants met at Wichita, Kansas, Friday afternoon and Saturday, January 24 and 25, for an informal regional conference with President Merle Schaff of Philadelphia, Executive Secretary Walter E. Soderstrom of New York, and Vice-President A. G. McCormick, Jr., of the McCormick-Armstrong Company of Wichita.

Preceding the dinner at 6:30 Friday evening, the afternoon was spent in informal conferences with the president and secretary of NAPL, and in inspection tours of Wichita's more extensive and modern lithographic plants.

The entire meeting was informal, both morning and afternoon sessions on Saturday being in the nature of general round-table discussions under the leadership of Herb Carr, president of the Mutual Press, Hutchinson, Kansas.

Subjects discussed pertained to matters of policy and management only as no time was devoted to the discussion of production problems. An agenda of 24 questions pertaining to ethics, selling methods and business procedure, were

presented for discussion. It included such problems of management as the following:

Customers alterations: how to reduce them; how to charge for them.

When and how to make comparison of costs of letterpress and offset? Is there any quick and easy method to tell which is cheaper or better for any one job?

Charging for art work and layout. How handle this? Should charges be made on time basis or on arbitrary values placed on work?

What to do about submitting art work and layouts in competition? How far is it profitable to do this? What information should you have in order to decide this question?

Are losses caused by salesmen selling offset when they do not understand its technical limitations? How can we educate salesmen to sell offset profitably?

The danger of sacrificing profits and quality by trying to out-promise competition on rush deliveries.

Should negatives, plates, and paste-ups prepared by ourselves ever be released to customer?

Is it good business to handle orders

for jobs which we do not have equipment to produce profitably?

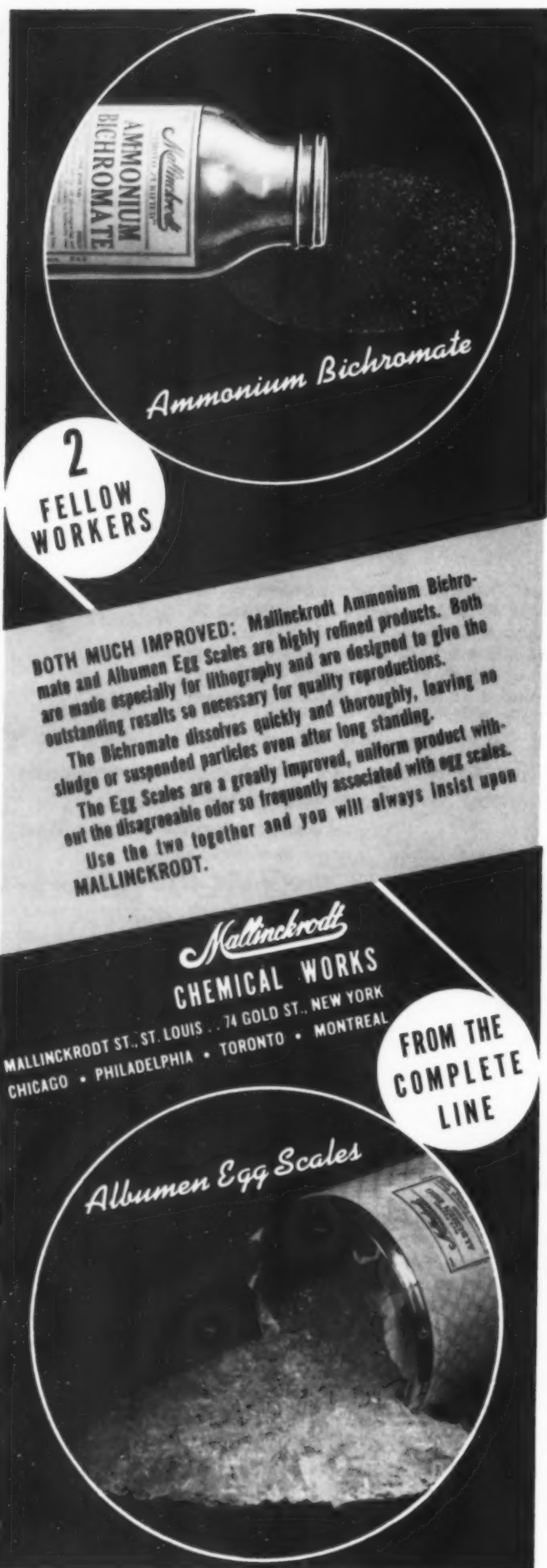
How to arrive at costs of offset. What simple system can be used?

What should we do to regain the costs of materials for plate-making, glass, film, zinc, chemicals, etc.? Should they be itemized in the estimate or regarded as general expense?

It was not the purpose of the meeting to arrive at any definite decisions nor to take official action; however, there was a general agreement among those in attendance as to policies which should govern their individual action in regard to various of the problems discussed.

Charge Corrupt Decal Bidding

Charges of "politics" and "favoritism" were aired in Chicago newspapers last month in connection with the placing of bids on a state government contract for decalcomanias to be used by the State Liquor Commission. Contracts made with American Decalcomania Co., Chicago, were cancelled by former acting Governor John Stelle, who claimed that specifications called for a patented tinting process controlled by American Decalcomania Co., and therefore their



2 FELLOW WORKERS

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bid of 75 cents per thousand was not competitive. Newspapers pointed out, however, that a company executive is a cousin of an alderman prominent in the Kelly-Nash city hall faction to whom Stelle supporters are opposed.

Jaco-Lac Decal Corp., Chicago, state that they were unable to obtain information on which to make bids, although they were prepared to bid less than 48 cents per thousand, and able to submit evidence of considerable decal stamp work done for the federal government.

Hoe Reports 1940 Profit

R. Hoe & Co., New York, manufacturers of printing and lithographic presses, report a net profit of \$200,087 for the fiscal year ended September 30, 1940. After annual dividend requirements on the 6½ per cent prior preferred and 7 per cent preferred stocks, this is equivalent to \$1.54 a share on \$4 class A stock. In 1939 the company sustained a net loss of \$145,278. Net sales for the year totaled \$4,201,912 as compared with \$2,221,594 in 1939, an increase of 89 per cent. Unfilled orders at the present time amount to \$6,277,856 compared with \$1,628,384 a year ago. Due to the large number of orders on hand, the company expects to operate at near capacity production all this year.

Discuss Labor Dispute

The Young Lithographers Association of New York, held its regular monthly dinner meeting on February 5th at the New York Advertising Club. The subject under discussion was "Labor in the Graphic Arts," and special attention was given to the jurisdictional dispute between printers and lithographers. Benjamin M. Robinson, member of the New York Bar and formerly counsel to the National Lithographic Code Authority, was guest speaker.

William Paul Pickhardt Dies

William Paul Pickhardt, 60, formerly chairman of the board of Agfa Ansco, manufacturers of photographic supplies, died in New York last month. He was to have been elected chairman of the board of the General Aniline & Film Corp., with which Agfa Ansco merged a year ago. Mr. Pickhardt started his career in chemistry in 1901 when he joined his father's firm, Kutroff, Pickhardt & Co., the first to bring fast color

West Virginia Pulp and Paper Co.

Manufacturers of WESTVAC® Mill Brand Papers



1941

January							April							July							October						
SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT
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February							May							August							November						
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March							June							September							December								
SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT		
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230 PARK AVENUE, NEW YORK

Philadelphia Chicago San Francisco

"Transportation in the Sixties" is the title of the painting on West Virginia Pulp and Paper's 1941 calendar. It has been reproduced in eight colors by offset lithography.

coal-tar dyes from Germany to this country. He served as president of his father's company and then became a director of the General Dyestuffs Corp., with which the firm merged. He was an active director of the Plaskon Co., of Toledo, Ohio, a pioneer plastic manufacturing company. Mr. Pickhardt was also a director of the American Magnesium Corp. of Cleveland. He was prominent among those responsible for development of the processes of magnesium fabrication and aided in bringing synthetic rubber processes to America.

Hear H. A. Speckman

H. A. Speckman, sales manager, McCandlish Lithograph Corp., Philadelphia, addressed members of the 12th Annual Survey of Advertising Course conducted by the Advertising Women of

New York, on February 3rd at the New York Herald Tribune Conference Room. Mr. Speckman discussed point-of-sale advertising and covered the subjects of dealer helps, point-of-sale displays, merchandising aids, packaging, and the function and importance of this material in the problem of distribution.

Hear Roger Stephens

Roger Stephens, publisher of *Litho Media*, was guest speaker at a meeting of the New York Photo-Lithographers Association held last month at the Building Trades Club, New York. Mr. Stephens, who has had wide experience in the lithographic industry as a sales manager, plant owner and recently as a sales counsellor for lithographers around the country, discussed "Planning Lithographic Selling for 1941."

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CHEMICALS	DRY PLATES & FILMS
ZINC PLATES	PLATEMAKING EQUIPMENT
ALUMINUM PLATES	OPAQUES
GLASS PLATES	LENSES
MULTILITH PLATES	LITHO CRAYON
LITHO INKS	LITHO CRAYON PAPER
VARNISHES	CARBONS
DRYERS	DEVELOPING INKS
COMPOSING MACHINES	FILM DRYERS
FOLDING MACHINERY	PRESSES
SHADING MEDIUMS	OFFSET SPRAY GUNS
VACUUM PUMPS	ROLLERS
TYPEWRITERS	PRESS CLEANERS
DIE CUTTING & FINISHERS	MOTORS
OFFSET PAPERS	BLANKETS

pH CONTROL

MODERN LITHOGRAPHY'S "Where-to-Buy-It" directory appears monthly. Consult it when you're in the market for new equipment and supplies.

NEW EQUIPMENT AND BULLETINS

New Cantine Specimens

Martin Cantine Co., Saugerties, N.Y., has just issued specimens of its Ashokan and M-C Folding papers in the form of two new sections of its "Book of Coated Papers and Advertising Information." Black and white halftone illustrations and full-color reproductions are shown. Copies available.

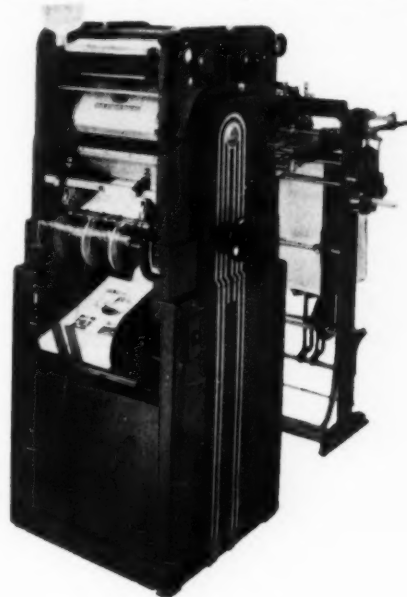
Air Conditioning Movie

Carrier Corp., Syracuse, N. Y., held a preview of the first motion picture on air conditioning, which it has just produced, at the Waldorf Astoria Hotel, New York, last month.

Davidson Dual Duplicator

Davidson Manufacturing Corp., Chicago, has just announced the Dual Duplicator, a machine capable, it is declared, of producing both offset and letterpress printing. Only two cylinders are used for offset work instead of the conventional three cylinders, it is pointed out. The upper cylinder is composed of a plate segment and an impression segment and is twice the circumference of the blanket cylinder. The blanket cylinder makes two revolutions while the large cylinder is making one. As the large cylinder revolves, the impression from the plate is transferred to the blanket cylinder and as the impression segment reaches the blanket cylinder, the impression is transferred to the paper which is fed at that moment. According to the manufacturer, the change-over to relief duplication requires approximately five minutes. The dampening unit is lifted off, the plate segment removed, and a channel segment for loose type and electros, or a segment for mounting rubber plates is substituted. The blanket cylinder then becomes the platen and the duplicator is ready to print letterpress. Grippers are part of a continuous chain mechanism which controls the sheet all the way to the paper catcher. Plates may be adjusted in four directions to control color registration. For reproduction by

offset, a specially prepared paper-backed plate is used. Typing, long hand, drawings, lettering, ruled lines, etc., may be done directly on this plate, it is said.



A special plate is also available for photographs, wash drawings and other subjects in halftone. It is said that the new machine will handle practically any type of paper in sizes from 3 x 5 inches to 10 x 14 inches at a speed of approximately 6000 sheets per hour. A booklet giving full details regarding the Davidson Dual Duplicator is available on request.

LTF Issues Yearly Report

The Lithographic Technical Foundation, New York, has just issued an annual summary of its progress in graphic arts education and research for 1940. The bulletin calls attention to research work carried out in collaboration with the National Bureau of Standards, at Washington, for the improvement of lithographic papers, pointing out that complete laboratory test data are now being obtained on offset papers to show the effects of different fibers and different degrees of fiber refinement.

Much work has also been done in the field of printing surfaces, according to

the bulletin, with the object of discovering new and better materials or processes, although several promising leads have failed to exhibit any material progress.

The effects of three variable factors, namely, atmospheric humidity, properties of paper, and ink composition, and their effects on the drying of lithographic inks have been studied by the Foundation. It is hoped that the findings here will enable improvement to be made in the control of ink drying time in the pressroom. In the field of tone and color reproduction, experimental proof of certain theories have been evolved which, it is hoped, will lead to definite improvement in halftone reproduction.

During the last year, also, the Foundation reports encouraging progress in its educational efforts. Some 25 different lithographic courses in Boston and Philadelphia, as well as New York, are being offered.

In addition to the regular annual bulletin, the Foundation also issued two supplementary technical reports, one on temperature conditioning of paper, and the other on platemaking solutions. The first contains a chart for determining the time that cold paper should be stored at pressroom temperature before removing the moisture-proof wrapping. The second, on platemaking solutions, contains information about deep-etch for zinc and aluminum plates, and on coloring matter for dichromated gum coatings.

Issues Sixth PAC Report

General Printing Ink Corp., New York, has just issued "Salesmanship in Print," a report on number six in the series of Printing and Advertising Clinics which it sponsors. Included with the report is a small booklet which explains the meaning of PAC and contains a brief summary of the speakers and subjects presented during 1940. All six of the PAC transcripts are available on request.

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3-4531

Booklet on Defense Problems

The Brookings Institution, Washington, D. C., has just published "Fundamental Economic Issues in National Defense," a pamphlet based on research studies, made possible by grants from the Falk Foundation, Pittsburgh, of problems concerning the national defense program. Some of the questions raised and discussed are: (1) Will the national defense program require extensive readjustments in the economic life of the nation? (2) Can the defense program be financed without an enormous increase of the public debt? (3) Is it possible to carry through the defense program without a great inflation of commodity prices? (4) Are we inevitably faced with a catastrophic economic collapse at the end of the war? Copies of the booklet are available at 25 cents each.

National Color Print Calculator

When making continuous tone positives for offset from "indirect" separation negatives, a clue to the printing time of the different positives is essential, particularly if the negatives are out of balance. Those workers who analyze the negatives by densitometer reading will find the Color Print Calculator manufactured by National Photocolor Corp., New York, a speedy and accurate means of arriving at correct exposure factors.

The calculator consists of a square metal plate upon which is mounted a movable metal disk. The disk is graduated in density values, while the main plate is calibrated in terms of opacity which in turn are used as exposure factors.

Assuming that the gray scales recorded on the negatives have been measured on a densitometer, and are found to be considerably out of balance, the procedure would be as follows: by reason of expert judgment or by trial and error, establish the correct exposure for one of the negatives. Let us suppose, for example, that the highlight portion of the gray scale in each of the negatives reads as follows:

- Blue Printer (red filter negative)
—Density 1.30
- Yellow Printer (blue filter negative)
—Density 1.40
- Red Printer (green filter negative)
—Density 1.25

Black Printer (yellow filter negative)—Density 1.55

Having established the correct exposure time for the blue positive (red filter negative), let us say 30 seconds, we would now resort to the calculator to find the time for exposing the other positives.

By rotating the dial we set the Density Unit Scale at 1.30 (highlight value of red-filtered negative) opposite 30 seconds. We now read the new time opposite the highlight densities of the other negatives. Thus the yellow positive would receive 38 seconds exposure, the red positive would require 27 seconds while the black positive needs 54 seconds.

In many cases where the operator prefers to make his positives of different densities and contrasts, the factors obtained by the calculator would indicate the differential exposures required to bring an out-of-balance set into balance. From these factors the operator can deviate to suit his needs. Obviously the scale is conducive to a saving of time and material.

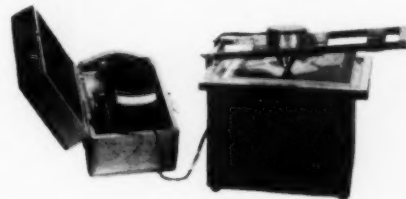
New ATF Collating Machine

The Webendorfer Division of American Type Founders, Elizabeth, N. J., has just announced a new all-rotary collating machine designed for use with the web snap-out and form offset press. The unit is built to handle various combinations of paper and carbon, such as 7 parts paper and 6 parts carbon or 5 parts paper and 4 parts carbon, or special combinations to suit the needs of the user. Both paper and carbon are fed from rolls and handled in a straight line operation. In collating the paper and carbon ribbons, the machine automatically glues along one edge, aligns for register and delivers in cutoff sheets. Sheets may be cut off in multiples of $4\frac{1}{4}$, $8\frac{1}{2}$, 11, 17 and 22 inches. According to the company, the machine has a capacity of 8,000 collated and glued snapout forms per hour and may be run on a motor of 2 h. p.

Photrix Photometer Folder

Intercontinental Marketing Corp., New York, has just issued an 8-page folder describing the various photographic applications of the Photrix Photometer. The new folder deals particularly with the use of the Photometer

for measuring the density of negatives and for determining exposure time in contact printing and enlarging, as well as for balancing of three-color separa-



tion negatives. Instructions are furnished to enable the cameraman to set up a device for illuminating negatives from below so as to measure the density in selected portions of the negatives with the Photrix Photometer. Other chapters of the folder refer to light measurements on enlargers and discuss the subject of dodging and spot printing on the basis of photoelectric light measurements. Copies available.

Litho Equipment Expands

Litho Equipment and Supply Co., Chicago, manufacturer of offset plate-making equipment, has recently added 6,000 sq. ft. of floor to its present location. C. E. Valette, president, states that the larger facilities are necessary because of increased production of its plate-making equipment line and because the company is going into production on a power-driven proving press. A portion of the new space will be made into a show room where a complete offset plate-making department will be installed for demonstration purposes.

Offers Consulting Service

The New York Employing Printers Association has announced a complete printing consulting service as a part of the current "Print It In New York" campaign, which will make available to buyers of printing its complete file of items used by American business concerns. This service was formerly available only to members of the Association. The printing file has been gathered from all parts of the country and contains more than 15,000 specimens which are catalogued under approximately 250 major and sub-classifications. The new printing consulting service includes a large reference library of books, periodicals and government reports covering practically all phases of printing, advertising, merchandising, business research



WANT REAL *Color Separation* VALUE? Use **ILFORD "Pan" PLATES**

If your shop is enjoying the ever increasing amount of color "copy" YOU should investigate ILFORD PANCHROMATIC PLATES today!

- HIGHER UNIFORMITY
- LONGER LIFE
- BETTER COLOR SEPARATION VALUE
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- CONTRAST ADAPTABILITY TO OFFSET PROCESS

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Eastern Depot—

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Mid-Western Depot—

316 W. WASHINGTON STREET, CHICAGO, ILL.

GOOD INKS AS YOU LIKE THEM

Color strength and brilliance plus uniformly good press working properties make Sinclair & Carroll inks the choice of leading lithographers throughout the country. In pressrooms, large and small, these inks are winning new friends and proving their all around dependability.

Sinclair & Carroll inks are carefully supervised in their manufacture by men whose lifetimes have been spent not only in supplying your standard ink requirements, but also in developing and improving your inks to their present high standard.

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LOS ANGELES
417 E. Pico St.
Tel. Prospect 7296

SAN FRANCISCO
345 Battery St.
Tel. Garfield 5834

NEW ORLEANS
518 Natchez St.
Tel. Main 4421

and allied subjects. The service will also provide advice to executives on sources for obtaining art work and commercial photography, copywriting and other specialized services. A special section is devoted to information on how to compile mailing lists and ideas on the successful use of lists. New York executives may avail themselves of the new service, without charge, upon application to the New York Employing Printers Association. Courtesy cards entitling the holders to the privileges of the service may also be obtained from member firms of the association.

Bibliography of Films

The Lithographers National Association, New York, has just compiled a bibliography of the outstanding films available on graphic arts production. The films listed are: "Behind the Scenes with Harris," a 16mm. sound film in black and white, produced by Harris-Seybold-Potter Co., Cleveland; "The Creation and Production of Advertising Displays," a movie now in the process of production and soon to be distributed by McCandlish Lithograph Corp., Philadelphia; "The Fundamentals of Lithographic Printing," a 16mm., black and white slide film published by the Society for Visual Education, Chicago, which presents in a sequence of 25 still scenes the historical background of lithography and its technological progress to the present day. Material for the film was furnished by members of the L. N. A.

Also, "Keeping in Touch," a 16mm. sound and color film in 2 reels, describing the role of printing ink as a factor in modern life, produced by Interchemical Corp., New York; "The Making of Offset Press Plates," 16mm. 3 reel silent film, in color, distributed by Harris-Seybold-Potter Co.; "The Making of a 24-Sheet Poster" a 3 reel silent film, 16mm., in color and in black-and-white, produced by McCandlish Lithograph Corp.; "Packaging—A Public Service" and "Packaging Marches On," 16mm. sound and color films of 3 reels each, distributed by *Modern Packaging*, New York.

Also, "Planography," a 2 reel silent film, 16mm., in black-and-white produced by Harris-Seybold-Potter Co.; "Serving the Graphic Arts," 16mm. film in sound and color showing the manufacture of letterpress and lithographic

inks, dry colors and varnishes, produced by Sinclair & Valentine Co., New York; and "A Short Course in Paper Making" a sound film in black-and-white, 16mm., 1200 ft., distributed by P. H. Glatfelter Co., Spring Grove, Pa. All films are free, subject to arrangements for projection, handling, etc. Further information available from the Lithographers National Association, 295 Madison Ave., New York.

New ATF Filt-Air-Lite

American Type Founders, Inc., Elizabeth, N. J., has introduced the ATF Filt-Air-Lite, a combination air filter



and fluorescent lamp, developed for the purpose of correcting the problem of dust control prevalent in plants using non-offset spray equipment. Placed directly over the delivery of the press, the Filt-Air-Lite is said to capture the floating spray from the non-offset gun by means of suction and absorbs the particles by hair filters. The clean air passes out into the room through the top of the overhanging hood. Fluorescent lamps contained in the hood throw daylight lighting upon the sheets in the delivery, assisting the press operator in checking up on color, register, etc. The Filt-Air-Lite is available in two sizes, one for presses up to 17 x 22 and the other for presses up to 25 x 38. Both sizes may be obtained with or without the fluorescent lamps.

New Dress for Linotype News

The latest issue of the *Linotype News*, published by Mergenthaler Linotype Co., Brooklyn, has just come off the press with a new format. Beginning with the current number, part of the publication will be presented in the form of a news-magazine that will show the latest typographic and pictorial treat-

ments while a separate section will be in newspaper form and present various tabloid and standard-size newspaper treatments.

Report Record Press Sales

E. G. Ryan & Co., Chicago, report sales of twenty new Webendorfer offset presses during December to printers in their territory, which covers eight middle western states. Half of this number went into Chicago plants. This was the biggest month's business in the company's history, according to a sales representative of the Ryan company.

Signs and Displays Up

According to a report recently issued by the U. S. Bureau of the Census, every branch of the business of manufacturing advertising signs, displays and novelties expanded in 1939. Combined production was valued at \$87,625,220, a gain of 15% over the figures in the 1937 census.

Lithographs Unusual Menus

Stecher-Traung Lithograph Corp., San Francisco, has just completed an unusual series of menu folders and luncheon cards for the American President Lines. The series depicts colorful tropical scenes and is beautifully reproduced in eight colors, 200-line screen, on deep-etch plates. The job is outstanding in that the colors have a continuous tone effect and it is impossible to detect any dot or patterning. Approximately 650,000 of the menus will be used on the various ships of the American President Lines. The series was planned by Lord & Thomas, San Francisco advertising agency, under the direction of Ray Bethers, its art director. The artist was Amato Gonzales. Because of its beauty and unusual interest, the Stecher-Traung menu series has been chosen to illustrate lithographic advertising art at the San Francisco Art Directors' show to be held March 25th at the San Francisco Museum of Art.

Edmund L. Thompson Dies

Edmund Leslie Thompson, city representative and salesman for Democrat Printing & Lithographing Co., Little Rock, Ark., died last month. Mr. Thompson was connected with Democrat Printing & Litho for 24 years.

PRESSMEN KNOW THE DIFFERENCE

Today's offset pressman is an able craftsman. Faster press speeds, multi-color production and shorter delivery time have made it imperative that he be expertly trained and equipped with a rich background of experience. Indeed, experience is his most valuable asset. No longer does he need to experiment, to feel his way. He knows. Hence, his recommendation is worth its weight in gold. That is why his preference for ECLIPSE DEEP-SET BLACK is so convincing. You know that it is based on long experience. Ask your pressman. He knows the difference. He'll pick ECLIPSE DEEP-SET BLACK every time!



TRY ECLIPSE ON YOUR NEXT RUN AND BE CONVINCED

GAETJENS, BERGER & WIRTH, Inc.

35 York St., Brooklyn, N. Y.

538 S. Clark St., Chicago, Ill.

MANUFACTURERS OF PRINTING AND LITHO INKS, VARNISHES AND DRYERS

SERVICE PLUS QUALITY!

HAS MADE OUR PLANT THE WORLD'S LARGEST

**WE SPECIALIZE IN
SMALL PLATES**

ALSO REGRAINING MULTILITH

**ZINC and
ALUMINUM PLATES**
UNGRAINED—GRAINED—REGRAINED

LITHOGRAPHIC PLATE GRAINING CO.
OF AMERICA INC.

37-43 BOX STREET., BROOKLYN, N. Y. EVERGREEN 9-4260, 4261

Wanted: A method, etc.

(from page 36)

gained at only slightly greater expense in time and effort.

On the other hand, the colors used for the test must be sufficiently close to the ideals to yield satisfactory prints. Too great a variation would prove no more useful than present methods of judgment. The materials mentioned above very closely approach the ideal for yellow and blue green. Unfortunately, the magenta is too far out for our purposes. It is to be hoped that the producers will improve their product in this in the very near future.

The need is here and the way to a solution has been successfully demonstrated. It remains for research to accomplish that last measure of improvement to make it fully practical.

Announce Cantine Awards

The Martin Cantine Co., Saugerties, N. Y., manufacturer of coated papers for offset and letterpress, has just announced winners in its Annual Awards contest for outstanding skill in the production of printing and lithography. Among this year's 38 winners were:

"Display Cases and Coolers," a broadside produced by Mullan Corp., Philadelphia, for Bally Case & Cooler Co., Bally, Pa., on Cantine's Zena Offset; a cover for *The Depictor*, printed for and by Edward Stern & Co., Philadelphia, on Cantine's Canfold Cover; "Season's Greetings," a display produced by Plampin Litho Co., New York, for Schenley Distillers Corp., on Cantine's Litho Coated; "Hickok," a label produced for Hickok Manufacturing Co., Rochester, N. Y., by the Syracuse Lithographing Co., Syracuse, N. Y., on Cantine's Catskill Litho; "Current Photography—December 1940," a magazine printed by Williams & Marcus Co., Philadelphia, for *Current Photography* on Cantine's Catskill text, with M-C Folding cover; "Annual Review & Exhibition Drill," a program printed for Christian Brothers' Academy by The Argus Co., both of Albany, N. Y.; "Gul for 1940," a school annual produced by the McClelland Press, Williamstown, Mass., for Williams College on Cantine's Ashokan; and "Unquity Echo—Anniversary Issue," a school magazine printed for Milton High School, Milton, Mass., by Pine Press, Dorchester, Mass., on Cantine's Zena.

Lithographs Bird Study

National Process Co., New York, has recently lithographed and distributed a limited number of copies of "Day-

break," a lithograph of wild birds in flight, by Rudolf Freund. Mr. Freund is well known for his paintings and lithographs of birds and animals, and has prepared a number of the exhibits which appear in the American Museum of Natural History, New York. Since Mr. Freund is a lithographic artist of unusual ability, his prints have a charm and feeling which is difficult to reproduce. National Process, however, has turned out a handsome reproduction of "Daybreak" that is a credit both to them and the artist.

Appoint S. D. Meindersma

The Chicago School of Printing & Lithography has announced the appointment of S. D. Meindersma as instructor in offset press work to replace Wm. A. Stevens who recently resigned. Mr. Meindersma gained his experience with Magill-Weinsheimer Co., Meyercord Co., Rand, McNally & Co. and other lithographers in Chicago and elsewhere. During the first World War, he served with the U. S. Army's mobile lithographing unit in France and with the American army of occupation in Germany.

Chicago Craftsmen Hear Talbot

Dr. Wm. F. Talbot, research director of General Printing Ink Corp., was guest speaker at the annual "Ink Night" meeting of the Chicago Club of Printing House Craftsmen, held January 21. Discussing "Research With Its Sleeves Rolled Up," Dr. Talbot emphasized that research, to be successful, must be hard-headed, practical and correlated with production, sales and management. Following his address a motion picture, "Inside the Flame," was shown, which tells the story of carbon black. A movie made by Fred H. Farnsworth, Chicago manager of the Sigmund Ullman Co., while on a trip through Mexico, was also shown.

Craftsmen Hear Latham

C. W. Latham, well-known lecturer and instructor on offset press operation, addressed the regular monthly meeting of the New York Club of Printing House Craftsmen at the Building Trades Club, in New York, last month. Mr. Latham's subject was "Offset Printing." The meeting was also addressed by Russel

Hogan, of the Wickersham Press, New York. Mr. Hogan discussed letterpress printing. A question and answer period followed the two talks. In his talk Mr. Latham outlined the essential differences between offset and letterpress, the different kinds of ink used, the essential differences in the construction and operation of the two types of presses, etc.

PAC Begins Second Year

The first of this year's Printing and Advertising Clinics, sponsored by General Printing Ink Corp., New York, will be held on February 20th at the G. P. I. Galleries, 100 Sixth Avenue. The speakers scheduled are Dr. Walter S. Landis, vice-president of American Cyanamid Co., on "Research in Industry;" Elmo Roper, market analyst, on "Research in Markets;" and Dr. William F. Talbot, research director of General Printing Ink Corp., on "Research in Printing Inks."

Installs Air Conditioning Unit

Sorg Paper Co., Middletown, Ohio, has just announced the installation of automatic air conditioning equipment in its finishing room. The purpose of the new equipment is to control the temperature and humidity of the air that comes into contact with the paper in the finishing room while it is being sealed and packaged for shipment. This unit will supplement the company's verigraph equipment which enables the manufacture of paper with a given per cent of moisture.

Announce Paper Contest

The latest issue of "Permanized Selling," house organ of the Whiting-Plover Paper Co., Stevens Point, Wis., announces a contest to discover unusual uses for its Permanized papers. Prizes will be awarded for the best samples or ideas for unusual applications utilizing Permanized papers. Copies available.

Add Metal Litho Equipment

Green Duck Co., Chicago, producer of metal advertising novelties, has just purchased a Rutherford photo-composing machine for a press plate 29 x 42 inches, a Rutherford streamlined coating machine and a rotary metal decorating press through the Chicago office of Rutherford Machinery Co.

GOERZ

American-Made LENSES for Photolithography "The Most Exact Tools"



ARTAR APOCHROMAT
f:9 to f:16

The ideal lens for color separation negatives. Color-corrected to produce images of the same size, to correctly superimpose in the finishing process. Focal lengths: 9 1/2 to 70 inches. New sizes 4" and 6" for color separation blowups from 35 mm. Kodachrome.

GOTAR ANASTIGMAT
f:6.8, f:8, f:10

Assuring freedom from distortion, this is the ideal lens for intricate subjects requiring an intense clarity of definition. Focal lengths: 8 1/4 to 24 inches.

GOERZ PRISMS

of the Highest Accuracy — For reversed negatives to save stripping the film, and reduction work.

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317 EAST 34th ST. NEW YORK CITY

American Lens Makers since 1899

BEN DAY, Inc.



118 East 28th Street, N. Y.

U. S. Offers:

**The most complete
finishing service
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VARNISHING
LACQUERING
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TIN MOUNTING

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HEAT SEAL ADHESIVES
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MOISTURE-VAPOR
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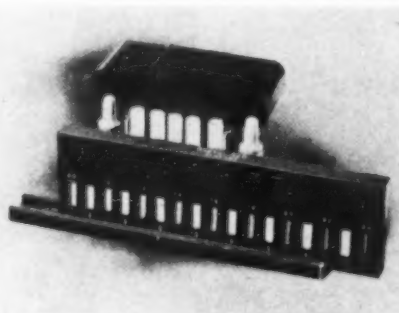
Your correspondence on any finishing problem will have our prompt and careful consideration.

U. S. FINISHING & MFG. CO.

775 WEST JACKSON BLVD.

CHICAGO, ILLINOIS

TAYLOR pH SLIDE COMPARATORS



for
Control
of
FOUNTAIN
SOLUTIONS

Simple - Rapid - Accurate

Determinations are made by moving the color standard slide in front of the test sample until a color match is obtained and reading the pH from the values engraved on the slide.

All Color Standards carry an Unlimited Guarantee.

For zinc plates fountain solutions should have a pH of 3.8 and a bromphenol blue (pH 3.0—4.6) slide comparator is required. For aluminum plates the pH should be 4.6 and a bromcresol green (pH 3.8—5.4) comparator is required. The price of either set is \$15.00. In a wooden carrying case \$20.00. F.O.B. Baltimore.

Full information on request.

W. A. TAYLOR & CO., Inc.

7300 YORK ROAD

BALTIMORE, MD.

The Sales Manager and His Staff

(from page 33)

use of a daily report of calls (Fig. 3A). You will notice we have classified the various items which are keyed for the salesman's convenience so that he can simplify the making out of his report. The classification of the types of work the customer uses appears at the right side of the report.

"This is keyed also on our account record, and it is part of the salesman's responsibility to report to us what types of material the customers or prospects use in order to keep this classification up-to-date.

"Whenever he discusses any of these specific types of work with a customer or prospect he simply refers to the classification letter rather than elaborate on it. This simplifies the checking of the report. On the reverse side of the call slip (Fig. 3B) you will notice there is also information pertaining to new prospects or new accounts about whom we do not have complete information.

"The credit rating and the class of account are two items we take care of in the office. The advertising appropriation can be found by the salesman, and the buying peak can be obtained by questioning the customer or prospect. You will note there is a line to be filled in if the salesman feels a name should be added to the mailing list.

"We find that this report contains practically all the general information we need with regard to an account. The fact that it is made out daily gives us a reasonably good picture of the salesman's activities by accounts. This report is made out by the entire sales force."

•

Practical pH Control

(from page 38)

acidity has caused equally as much loss. Perhaps the most outstanding fact uncovered by my year and one-half of pH testing has been the discovery that a great number of presses operate at acid strengths much lower than can adequately produce sharp halftones or clear lettering and solids. In almost every instance the pressman thought his strength was much greater than it actually proved to be.

On numerous occasions I have stopped the over etching of a plate when on the press because the pressman thought the plate was scumming. Had the acid strength been adequate the scumming tendency would have been eliminated. A great number of plates have been etched into oblivion due to this. If the

fountain etch hasn't the ability to resist filling-in of the grain, such a scumming will occur that no plate can overcome. To this day I occasionally find plates started on plain water, something I will never understand. To give ink such a head start towards filling in seems like suicide to me because of the drastic measures that must be taken to overcome the scum once it has become anchored in the grain.

It might be well to state the acid values that can be used for practical work. Drawing from experience I would say that values between 3.8 and 5.4 are ideal. This represents acid strengths, in the solution, of between 60 and 2,000 times the strength of pure water which originally tests 7.0 pH. As you can see, there is plenty of room for additional strength between these tolerances. That should be sufficient latitude for the pressman. Readings below 3.8 do not necessarily mean that the job cannot run. However, at strengths such as 3.0 or less the corrosive action of the fountain etch will attack the grain and possibly ruin the plate before the job has been completed.

A great tendency to run deep-etch plates under excessive acid strengths has been observed in my visits to various pressrooms. I believe that the reverse is possible, that because the plate is deep-etched it is better to run with the fountain weaker than in the case of albumin plates. The repellent action of the fountain water does not need to be so active, for the ink has a better anchor on the deep-etched plate to resist bleeding. On a few occasions I have proven this while the press was running and the pressmen were very grateful.

MOST breakdowns on plates have occurred in the afternoon, or about 6 to 7 hours after a long run plate has been on the press. This is caused largely by the addition of acid to the fountain water during the day. By keeping a check on the strength of the fountain solution with pH tests, it is possible to locate the cause of trouble before it becomes necessary to "dope" the fountain and take the risk of ruining the plate. The true job of pH is to enable the pressman to know the condition of his fountain etch at all times and eliminate the extreme rise of acid strength without his knowledge.

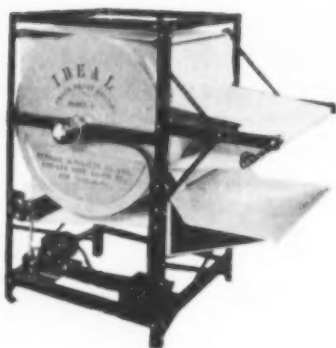
Carelessness, or, the lack of time necessary for washing out brass fountain pans, causes many headaches and untold grief. The fountain etch, if allowed to remain in the pan overnight, will increase its own acidity without the addition of acid. This is caused by the reaction between acid and brass. There is no visible change in the color of the fountain water, thus the pressman cannot detect this increase by eye. At least a dozen cases of this type of trouble were solved by pH tests in the last year.

In another case, dirty flannels underneath the new molletons caused a rapid increase in acidity. A pH test of the press water before it was added to the fountain and after 20 minutes in contact with the dampers, showed an increase in acid strength that couldn't be accounted for until the molletons were removed and the flannels rinsed and the rinse water tested.

In every case, when making a test for acidity, use the water from the fountain pan and not from the jug or can. There is frequently a difference in acid values between the two sources, due to action taking place during the operation of the press. The paper, ink and zinc plate can cause a rise in acidity that cannot be detected should the sample be taken from a source other than the fountain of the press. In taking your samples, I suggest that you use the sponge usually found in the pan, and by squeezing the sponge lightly, the correct amount of solution can be poured into the test tubes without spilling. This can be a nuisance and frequently cause an error should the tube contain more or less of the sample than is needed. There is a ration of 5cc of sample to .05cc of indicating fluid that must be maintained accurately to show correct readings.

In closing, I would like to impart this thought: for an industry, based upon chemical as well as mechanical perfection, it seems imperative that control over the variables encountered in the chemical formulas we use each day be given much serious thought. For this reason, I have spent much time and money in proving pH equipment efficient under practical circumstances. Much has been learned, much is to be learned.

Renew your subscription to M. L.



CHECK THESE 5 POINTS BEFORE YOU BUY ANY DRYER!

The New Improved SIMPLEX DRYERS Have Them All!

1. **BELT ALIGNMENT:** SIMPLEX DRYERS have a patented automatic belt control. No shifting from side to side.
2. **POSITIVE TRACTION:** SIMPLEX DRYERS are equipped with a direct worm gear drive, guaranteeing positive traction.
3. **DRYING ABILITY:** SIMPLEX DRYERS are guaranteed to properly dry any form of photographic paper—single or double weight, photostatic, blue print, negative paper, etc.—without any loss of size or tonal value. Dryers are made in 20, 30, 40 and 50 inch widths and are either gas or electrically heated. The popular 30 inch model has a drying capacity of Four hundred and fifty 8x10 prints per hour!
4. **SAFETY FEATURES:** ALL SIMPLEX Gas Models have a combination gas-electric switch and pilot light—making it impossible to turn off the motor without turning off the gas. (PATENTED) Electric models have 3-heat switch. Dryers may be used all day and turned off without injury to the belts. Prints are carried between the two belts—never touching hot metal.
5. **ADDITIONAL FEATURES:** Steel drive ball-bearing rollers. Enclosed gears connected with motor by flexible coupling—insuring longer life to motor and gears. Zipper-faced conveying belt. Dryers are fitted with either 110 or 220-Volt A. C. or D. C. Motor.

All machines are shipped set up, ready to install and will go through any door 31" wide by removing arms

FOR OFFSET PRINTERS who use negative paper, the SIMPLEX Double-belt Dryer is exactly suited to properly drying negative prints.

116-118 W. 14th St. **SIMPLEX SPECIALTY CO., Inc.** New York, N. Y.

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CRAMER
PLATE

FOR EVERY
Reproduction
NEED

SUPER CONTRAST	•	CRACO LITH
PANCHROME	•	CONTRAST
CRAMER "25"	•	ALPHA

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LITHOGRAPHIC ABSTRACTS

Abstracts of important current articles, patents, and books, compiled by the Research Department of the Lithographic Technical Foundation, Inc. These abstracts represent statements made by the authors of articles abstracted, and do not express the opinions of the abstractors or of the Research Department. Mimeographed lists have been prepared of (1) Periodicals Abstracted by the Department of Lithographic Research, and (2) Books of Interest to Lithographers. Either list may be obtained for six cents, or both for ten cents in coin or U. S. stamps. Address the Department of Lithographic Research, University of Cincinnati, Cincinnati, Ohio.

Photography and Color Correction

Single or Multiple Stops? Chas. C. Ammonds. *Process Engravers' Monthly*, 47, No. 563, Nov. 1940, p. 358. Although the use of a single stop is theoretically correct, the following practical considerations favor the use of two or three stops with a large square stop for highlighting: (1) reasonable latitude in screen distance is allowed, (2) the square stop produces a desirable slight steepening of gradation, and (3) highlighting of very flat originals permits the maximum control of dot formation. Extremely small stops for flashing demand a greatly extended screen distance to produce properly shaped dots. For color work the use of a single round stop is generally best.

The Mechanics of Color Separation. Herbert P. Paschel. *MODERN LITHOGRAPHY*, 8, No. 12, Dec. 1940, pp. 21-3, 55. A discussion of the contact, projection, and process camera methods of separating color films. The contact method assures absolute register and permits the recording of the utmost in tone and color values. For a large volume of work, the construction of a contact separator cabinet is recommended. For miniature transparencies the enlarger method is best. The process camera is used for enlarged and reduced negatives from large transparencies. The greatest disadvantage of this method is the inefficiency, current fluctuations, and heat of the arc lamps; to circumvent

these difficulties a fluorescent tube illuminating box is advocated.

Process Practice (No. 11). Frank H. Smith. *Process Engravers' Monthly*, 47, No. 563, Nov. 1940, pp. 368-9. Smith discusses the effect upon dot formation of square stops, three different types of extended corner stops, and freak stops.

Lateral Reversal. W. B. Hislop. *Process Engravers' Monthly*, 47, No. 563, Nov. 1940, pp. 364-5. In order to produce a final letterpress, litho, or gravure print reading the same as the original, the reversals must total to an even number. Dufaycolor transparencies should be viewed from the image side, and Kodachrome from the celluloid side. The need for a half-tone screen compensator in making combined line and half-tone negatives in the camera is explained.

Planographic Printing Surfaces and Plate Preparation

Exaktiv Process. Anonymous. *Klimschs Druckerei-Anzeiger*, 67, Sept. 27, 1940, p. 798. A process of deep-etch litho platemaking evolved by the Leipzig firm of Otto Kohler, employing neither gum arabic nor process glue, but utilizing instead German synthetic materials said to be germ- and bacteria-free. The ready-sensitized solution is of rather thick consistency, though it dries out into a thin film on the surface of the plate with normal whirling. It is claimed that over-development of the exposed image is more or less impossible (the operation takes place in one to two minutes) and that the developed image possesses great resistance to chemical and mechanical influences, thus assuring long press runs from the plate.

pH Determinations and Control of Plate Making Problems. Norman A. Mack. *Midwestern Lithographer*, 5, No. 8, Dec. 1940, pp. 1, 7. Following an

explanation of the pH scale, the importance of pH control of coating solutions and fountain etches is emphasized. A pH of 7.6, determined with Phenol Red indicator, is recommended for albumin-bichromate solutions. As variation in the acidity of egg scales often upsets the coating formula, this acidity should be checked using Chlorphenol Red. High fountain acidity destroys plate grain and causes ink scum, while fountain etches of low acid strength allow the plate to grease up. Fountain etch will change in strength due to contact with the brass in the fountain pan and feed rolls. For the pH control of fountain water, indicator Bromcresol Green is used.

Paper and Ink

Offset Paper at Work. William Bond Wheelwright. *MODERN LITHOGRAPHY*, 8, No. 12, Dec. 1940, pp. 35, 53. The discrepancy between outdoor and indoor temperatures and relative humidities causes most of the pressroom trouble with paper. If cold paper is brought into a warm pressroom, moisture will condense on the sides of the pile causing wavy edges. A skid or pile of paper should be allowed to come to pressroom temperature before the moisture-proof wrapping is removed. To facilitate this, the Paper-Temp, an instrument which resembles a sword hygrometer and indicates the temperature inside a pile of paper, has been developed.

Controlling Dry Color Characteristics. Paul A. Thomasset. *American Ink Maker*, 18, No. 11, Nov. 1940, pp. 25-8; No. 12, Dec. 1940, pp. 27, 29. There are three methods of obtaining organic pigments: (1) the use of the insoluble dye group itself, (2) the formation of insoluble metallic salts, and (3) the formation of complex salts with basic colors. Inorganic pigments are obtained by the formation of insoluble precipitates. Pigments for printing inks

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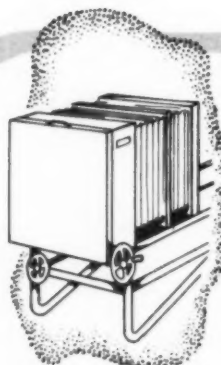


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must possess brilliance, strength, ease of grinding, compatibility with the vehicle to be used, resistance to bleeding, heat, and various other agents, and the proper shade. Factors affecting these properties are discussed.

Drying of Litho Inks. M. J. Leckey. *MODERN LITHOGRAPHY*, 8, No. 12, Dec. 1940, pp. 27-9. High humidity, excess water on the plate, fountain solution of too high pH, and most pigments retard ink drying. As laketine and alumina hydrate tend to absorb drier from an ink on standing, only the amount of ink necessary for a certain job should be mixed if these ingredients are used. Although the claim that too much drier causes a retarding action is not true, if drier is added beyond a certain point maximum efficiency is lost. New rollers and blankets tend to speed up drying for the first few hours of use. The absorbency of the paper stock is an important factor.

Infra Red Heat As An Aid to the Drying of Offset Ink. Ira W. Freeman. *Midwestern Lithographer*, 5, No. 7, Nov. 1940, pp. 1, 6-7; No. 8, Dec. 1940, pp. 5-7. Temperature, the nature of heat, and heat transfer by convection, conduction, and radiation are defined and explained. In heat transfer by radiation, heat energy travels from one point to another in the form of waves of fairly long wave-length, called infra-red rays. In applying this principle to ink drying, a row of ceramic surfaces which emit infra-red rays when heated by gas are mounted above the press. The radiation strikes the freshly printed surface and quickly raises the temperature within the ink mass to about 350 degrees F., thus initiating the drying process. Except in cases of very thin stock no distortion of the sheet is caused, and its moisture content is not affected.

Inorganic Chrome Pigment Production. Samuel C. Horning (to E. I. du Pont de Nemours & Co.). *U. S. Patent* No. 2,212,917 (Aug. 27, 1940). A process for rendering a colored pigment stable and resistant towards lithographic breakdown, comprising intimate association with an insoluble metallic chromate pigment, the particle size average of which does not exceed substantially 3.5 microns in length, an

insoluble, white hydrous oxide of a metal from the first sub-group of Group IV and Group V of the Periodic Table of Elements.

Printing Ink Extender Manufacture. William H. Wood (to Harris-Seybold-Potter Co.). *U. S. Patent* No. 2,225,289 (Dec. 17, 1940). As a new article of manufacture, a translucent extender for printing ink, including as an essential constituent a colloidal agent which is a hydrous oxide of an element of the fourth group of the periodic table of atomic number at least 14, retaining its bound water and being chemically uncombined with other constituents.

An Evaluation of Surface-Active Agents in Pigment Grinding. II. Detroit Paint and Varnish Production Club. *Paint, Oil, and Chemical Review*, 102, No. 23, Nov. 7, 1940, pp. 70-6. Tables and curves present data leading to the following conclusions: (1) The direct addition of a wetting agent to a mill paste will not necessarily decrease grinding time. (2) The speed of grind is directly related to the tackiness of the paste. (3) Grinding time can be decreased by an increase in pigment concentration. (4) Surface-active agents make it possible to handle high pigment-to-vehicle combinations. (5) The use of grinding aids does not decrease the number of necessary passes through the mill. (6) No saving was noted in the time required to grind in pebble mills. (7) Reactivity of surface-active agents with pigments and vehicles must be carefully watched. (8) All surface-active agents decreased the mixing time required. (9) The effect of surface-active agents on settling is marked.

General

Offset Press Operation. C. W. Latham. *MODERN LITHOGRAPHY*, 8, No. 12, Dec. 1940, pp. 36-7, 53. The setting and adjustment of the ink fountain is described in detail. Ink should not be applied to the rollers with an ink knife during makeready, but the fountain should be set at that time. Where the image covers one-quarter of the distance around the plate, the screw above that portion may be opened one-half turn. The plate should be carefully gummed with fresh and properly thinned gum at

every press stop. A sensible balance should be maintained between thumb screws and roller ratchet. If possible the water should be regulated to a point where it will just keep the plate clean, and then the ink run where it gives the most brilliant results and still pulls out sharp.

Offset Technique. John Stark. *Inland Printer*, 106, No. 3, Dec. 1940, pp. 55-7. In answer to questions submitted to him, Stark states that if ink changes color when printed from aluminum plates, it is the ink maker's problem exclusively. Albumin multilith plates may be strengthened by the use of a good litho lacquer solution and by reducing the fountain etch 50 per cent. The pH scale is explained and the application of pH in the control of fountain water and albumin coating solution is discussed.

Suggestions on Register Work for Young Pressmen. John Stark. *Lithographers' Journal*, 25, No. 9, Dec. 1940, pp. 372, 395. To insure accurate register the following operations must be carefully performed: (1) the feeder should be set to suit the paper to be printed, (2) the press should be carefully oiled, (3) the sheet guides on the gripper edge of the sheet must be set at right angles with the side guide, (4) grippers must be evenly set, (5) all clamp screws which have lock nuts must be securely fastened, (6) the first-color plate should be made about .002 inch thicker than the plates for the following colors, and (7) a new blanket should be thoroughly stretched and tightened before starting to print.

Humidity—Old Stuff and New. Arnold J. McAneny. *Graphic Arts Monthly*, 12, No. 12, Dec. 1940, pp. 62, 64-5. If the pressroom is humidified, paper with a moisture content suitable to that humidity should be ordered. If the pressroom is not humidified, paper should be allowed to come to room temperature before the water-proof wrapping is removed, and then should be hung immediately. Flat stock in a dry room will quickly acquire tight edges. Hanging is not a cure-all, however. Paper even when hung will curl if it dries out, because it will not shrink evenly on both sides. Some form of air-



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conditioning or humidifying equipment is recommended.

Cold Weather Tips for Metal Decorators. W. N. Misuraca. *National Lithographer*, 47, No. 12, Dec. 1940, p. 32. Waste of time and materials could be eliminated if proper heating facilities in metal decorating plants were maintained at all times. The lithographic department should never be allowed to fall below 65 degrees F. In many cases paint materials when cold acquire a false body or separate, flow poorly, and produce an unsatisfactory coated surface. They should never be reduced by the addition of solvents. A common source of winter trouble is the fact that the tin sheets become extremely cold during shipment, and it is almost impossible to obtain a good coating surface or lithographic impression on them.

Is Offset Practical for the Newspaper? William B. Marsh. *MODERN LITHOGRAPHY*, 8, No. 12, Dec. 1940, pp. 18-20, 55. In a survey of the experiences of 16 offset newspaper publishers, the following advantages of offset are reported: (1) it permits improved picture coverage at reasonable cost, (2) permits better service to advertisers, (3) cuts production time in the composing room, (4) opens up a larger field of commercial work, (5) is more economical for the small-town newspaper, (6) permits extensive use of local art work, and (7) permits the carrying out of the whole production process under one roof. Disadvantages are that: (1) it requires greater skill than letterpress, (2) the supply of trained operatives is limited, and (3) it is too slow for multiple-edition daily newspapers. Offset newspaper publishers want some form of type-composing machine that will eliminate metal casting and produce acceptable reading matter.

Miscellaneous

Coating Composition. Ernest L. Kallander and Joseph F. Thompson (to Dennison Mfg. Co.). *U. S. Patent* No. 2,227,720 (Jan. 7, 1941). The method of preparing aluminum foil to receive printing ink, which comprises applying to the foil a coating to which printing

will adhere, essentially consisting of: an etching agent resinous material which when dry, traps the agent from the foil, and ink and a solvent which when the coating is spread in a thin film dries out in approximately 2 to 6 seconds, whereby aluminum foil may be quickly prepared to receive printing so that the ink adheres firmly and the agent remaining in the dry coating is substantially inhibited from further action on either the foil or the ink.

Printing. William J. Wilkinson (one-half to Miehle Printing Press & Mfg. Co.). *U. S. Patent* No. 2,226,086 (Dec. 24, 1940). A hemi-tone intaglio printing-plate depicting at approximately one-half of their tone-values all tones of an original subject, having tones adjacent to white, by ink-wells of different areas etched in its printing surface, the solids, if any, of the subject being represented by relatively-large, practically-unconnected ink-wells occupying approximately one-half of each said solid area of the printing-plate and all lesser tones of the subject being represented by separated ink-wells of lesser areas in conformity with the tones which they depict.

Printing Press Specifications—Letterpress, Offset, Gravure. Anonymous. *Printing Equipment Engineer*, 61, No. 4, Dec. 1940, pp. 179-83. The following data are given in tabular form: maximum and minimum sheet size, inside chase capacity or maximum plate area, and impressions per hour or rotary production of platen, cylinder, and rotary letterpress machines, offset presses, newspaper presses, aniline presses, and sheet- and roll-feed gravure presses. The data are according to manufacturers' specifications.

Printing Processes. Anonymous. *Printing Equipment Engineer*, 61, No. 4, Dec. 1940, pp. 169-76. A review of letterpress, newspaper printing, rubber plate printing, photo-engraving, electrotyping, offset lithography, photogelatin, aquatone, and gravure.

Method of Preparing Photocollographic Printing Plates. James MacBride. *U. S. Patent* No. 2,226,314 (Dec. 24, 1940). The process of producing a photographic printing plate

consisting in coating a plated base with a hardened gelatin, allowing the coating to dry, bathing the coated base in a solution containing a sensitizing substance, allowing the coated base to dry at a controlled rate, exposing the sensitized coated base to a photographic impression from a light illuminated negative, subjecting the exposed coated base to a water bath of a predetermined temperature to cause a definite rate of swelling of the coating to form a printing grain, washing the remaining sensitized solution from the coated base, and finally immersing said coated base in a hygroscopic fluid.

The Munsell Color System.

Anonymous. *Journal of the Optical Society of America*, 30, No. 12, Dec. 1940, pp. 574-645. This series of articles gives a detailed and comprehensive review of the Munsell Color System. The following articles are included: (1) "History of the Munsell Color System and Its Scientific Application," by Dorothy Nickerson; (2) "An Analysis of the Original Munsell Color System," by John E. Tyler and Arthur C. Hardy; (3) "An Analysis of the Munsell Color System Based on Measurements Made in 1919 and 1926," by Kasson S. Gibson and Dorothy Nickerson; (4) "Trichromatic Analysis of the Munsell Book of Color," by James J. Glenn and James T. Killian; and (5) "Preliminary Report of the O. S. A. Subcommittee on the Spacing of the Munsell Colors," by Sidney M. Newhall.

To Establish Litho Bureau

Chicago Graphic Arts Federation has under discussion plans for a new service program with direct appeal to its lithographer-members. Possibilities of the proposed project were discussed at a dinner meeting last month, presided over by George A. McKiernan, Federation president, and attended by twenty-five printing and litho executives. Growing use of offset equipment in letterpress plants, it was explained, has created a large group in the Federation in need of technical advice on lithographing problems, but who do not feel at home in existing lithographic organizations. The proposed new services are thus being planned to provide technical and other information to lithographer-members of the Graphic Arts Federation.

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George H. Morrill Co., Div. General Printing Ink Corp.
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American Type Founders Sales Corp.
Artists Supply Co. (Opaque)
California Ink Co., Inc.
The Douthitt Corp.
Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp.
C. P. Goerz American Optical Co. (Lenses)
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International Press Cleaners & Mfg. Co. (Press Cleaner)
International Printing Ink, Div. of Interchemical Corp.
Kirable Electric Co. (Motors)
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Combination pressman and plate-maker steadily employed desires change with growing company that has a future to offer capable man. Experienced on Harris and Webendorfer presses. Also experienced in plate-making and can make both albumin and deep-etch. Ideal man for company that needs one man

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Assistant to Supt., offset-letterpress combination. Experienced in contact negatives, plate-making and layout. Desire employment in small or medium size plant in Mid-west. Address Box #656.

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Young offset pressman, knowledge plate-making, experienced on high-grade color work, able to take charge, desires to make a change. Address Box #657.

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Young lithographer with practical experience in all departments desires position as superintendent, or assistant to superintendent or manager, with progressive concern that appreciates initiative and organizing ability. Address Box #658.

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Experienced offset pressman on Harris & Webendorfer, accustomed to quality work and good production. Steady worker. Locate anywhere. Address Box #655.

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Experienced photo-lithographer. Color correcting on positives or negatives, dot-etching, process plate-making, some camera work. Address Box #647.

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Young Harris offset pressman desires position under capable supervision. Four years experience running two color and single color presses. Address Box #648.

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Young man, competent black and white and halftone photographer, working knowledge color process. Looking for shop doing better class work. Progressive, can adapt general photographic knowledge to various processes in offset photography. Address Box #650.

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" RUBBING INK

" TRANSFER INK

AUTOGRAPHIC TRANSFER INK

MUSIC-PLATE TRANSFER INK

Manufactured by

WM. KORN, INC.

260 WEST STREET

NEW YORK



"ASCO"

(RED)

OPAQUE

BLOCKS OUT

WITH A

SINGLE STROKE

Exceptional opacity

permits close

contact with print.

Ground extremely fine. Flows freely from brush, pen or airbrush. Leaves a thin smooth film that will not crack or chip off.

Test it yourself — Send for a sample.

ARTISTS SUPPLY COMPANY

7610 Decker Ave.

Cleveland, Ohio

Ask your dealer for "Asco"

MODERN LITHOGRAPHY

Hold Package Competition

The 10th annual All-America Package Competition, sponsored by *Modern Packaging* magazine, was held last month in New York. More than 30,000 items were shown, including window and floor displays, counter displays, metal containers, closures, folding cartons, labels and seals. Entries were judged on the basis of protection to the product, convenience, saleability, adaptability and good design. The window displays shown emphasized realism and many consisted of life-size figures in natural color. Labels for standard cans and bottles, as well as lithographed metal containers, were designed to give a maximum of indormation, such as re-maximum of information, such as recipes, ingredients and directions for use, along with natural color reproductions of the package's contents.

The prize winners will be announced in the March issue of *Modern Packaging* and awards will be officially presented at a banquet to be held at the Hotel Stevens, Chicago, on April 2nd. The competition entries are now on public display in Room 306, Chanin Building, New York.

Hein Litho Moves

Hein Lithographing Co., New York, has moved recently to 251 William Street. The firm was formerly located at 165 West 24th Street.

Charles M. Bryan Dies

Charles M. Bryan, 43, manager of the New York City branch of General Outdoor Advertising Co., died last month after an illness of several months. A member of the third generation of his family in the outdoor advertising business, Mr. Bryan joined General Outdoor in 1919. After working in its branches in Youngstown, Ohio; Indianapolis and Pittsburgh, he moved to New York in 1935. Mr. Bryan was a director and vice-president of the Broadway Association and a member of the Outdoor Advertising Association, of New York.

New Representative for Hammer

Hammer Dry Plate & Film Co., St. Louis, has announced the appointment of Edward C. Moran as its representative in Ohio, Michigan and Illinois. Mr. Moran was formerly connected with a number of lithographing firms in Chicago.

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"If he throws you out again, Cuthbert, remind me to speak to the boss about advertising."

Help your salesmen

GIVE your salesmen a lift . . . help them to get in to see the right men at the right places . . . help them avoid that terse turn-down, "not interested" . . . make your firm and your products better known in **ADVANCE** of salesmen's calls . . . **KEEP THEM** well known through the use of regular advertising in representative trade publications.

If it's in the lithographic field that you want to expand your business, we suggest that you look into the merits of regular advertising in

MODERN LITHOGRAPHY

254 West 31st Street

New York, N. Y.

Tale Ends

When Lever Bros. break that big campaign for Swan, the new floating soap with which they hope to give Ivory a run for its money, the middle of this month, 24-sheet posters will be one of the mainstays of the campaign. It will be the first time Lever has used outdoor in 13 years.

* * *

Well, Einson-Freeman's Rheingold Girl has been picked. It's Ruth Ownbey, a red-head. How the judges were ever able to decide from that bevy of gals Einson assembled in their "Ballots for Beauty" booklet is beyond us. Anyway, credit them with one of the slickest promotional ideas to come down the pike in many a day. It held half the nation's interest and you know which half!

* * *

That was friendly gesture on the part of William A. Freedman, well-known display mounter and finisher, of 655 Sixth Ave., New York. He had a photographer at the New York Photo-Lithographers Christmas party of recent vintage, and last month mailed mounted and enlarged prints to everyone who attended and came within range of his roving cameraman's lens. We give his address in case you were there and snapped and didn't get a shot. If he missed you, he'll be glad to send you one. Incidentally, the page of pictures of the party we ran last month were also by him. Thanks, Bill!

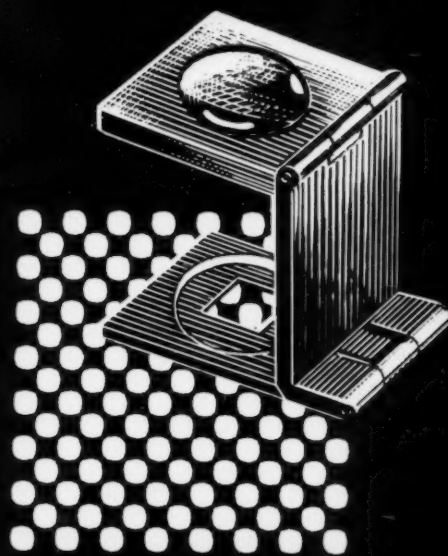
* * *

Correction: we've been ribbed and taken to task plenty over that glaring boner we pulled in the article about Miss Dorothea Brennan, director of the Educational Dept. of the Lithographers National Assn., last month. Of course, you know what it was. We said something about the lithographic industry being a \$200,000 industry. Add three goose eggs to that figure and you'll be nearer to what we meant.

* * *

We're not in competition with the trade and vocational schools offering courses in offset printing. No sir. May they thrive and prosper and their tribe increase. **BUT** we do think you can catch up on your back lithography and brush some of the cobwebs out of your mind, and give yourself a pretty fair liberal education in the art and production of lithography by reading **MODERN LITHOGRAPHY** every month, and by providing yourself with a copy of the revised Lithographer's Manual. You can get both now at a combination offer which is very attractive. Details can be conveniently found elsewhere in this issue.

MODERN LITHOGRAPHY



How many dots make a half-tone?

THE number of dots in a halftone is a determining factor in the quality of the reproduction. But more than the actual number, the character of each dot is vitally important.

For clear, sharp, dot formation that brings crisp detail in halftone work — your best choice is Agfa Reprolith with its inherently high contrast and great resolving power. In addition, you'll find that this versatile film in its regular,

ortho and pan emulsion types brings both "darkroom dependability" with its wide development latitude, and accurate retention of image detail with its effective anti-halation coating.

Next time you order film, be sure to ask for *Agfa Reprolith*. Its extra margin of quality assures finer halftone reproduction. Graphic Arts Division, Agfa Ansco, Binghamton, N. Y.

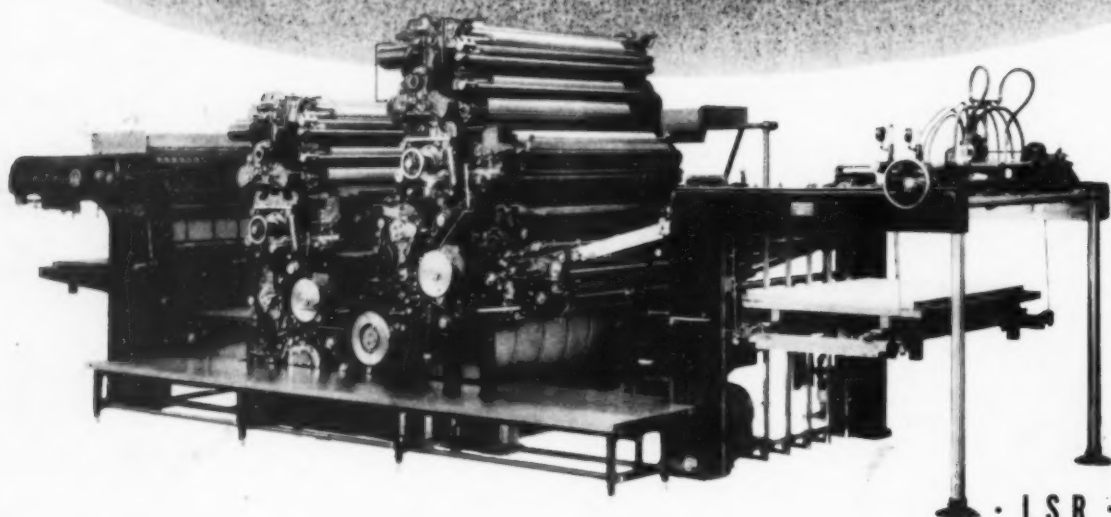
Agfa Reprolith Films

MADE IN U. S. A.



HARRIS

provided the Stepping Stones
for OFFSET PROGRESS



• LSR • 26" x 40"
TWO COLOR OFFSET

For over a quarter of a century Harris has provided the stepping stones for Offset progress. The first step was the innovation of improvement which paved the way for the advance of this industry as a whole.

Then, the complete line of Harris Presses has enabled lithographers individually to progress in gradual, safe strides from the simplest offset press to larger multi-color units. The benefits of Harris experience, and counsel based on this experience, has been important to the success of many lithographers.

HARRIS LITHO
CHEMICALS

Through research, Harris has developed and standardized new chemicals for both deep etch and surface plate making processes. Full details upon request. Write us with reference to your lithographic problems.

HARRIS OFFSET PRESSES

HARRIS · SEYBOLD · POTTER · COMPANY

PIONEER BUILDERS OF SUCCESSFUL OFFSET PRESSES

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